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CONTRIBUTORS TO VOLUME XCV.

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A CASE OF PROGRESSIVE PERNICIOUS ANÆMIA.

BY E. H. BRADFORD, M. D.

THE patient was a girl aged eleven, of well-built frame; she is said by her relatives to have been hitherto remarkably healthy, with a bright, florid complexion. The dwelling-house had a much better exposure to sunlight than is usually found among the poorer classes in large cities. There had been no lack of good food. The other members of the family bore all the appearances of health. About the middle of March the parents noticed that the girl's appetite began to fail. She gradually lost strength and color. On May 1st, when the patient was first seen, there was extreme pallor. The prolabia and fauces were almost cream-colored. There was no emaciation. Patient was extremely weak, and fainted on the slightest exertion, perhaps a dozen or twenty times during the day. Complained of shifting pains, particularly in calves of legs. Appetite capricious, bowels regular, epistaxis frequent, slight hæmorrhages from gums, a profuse bloody expectoration. There was a slight cough and an extremely disagreeable odor from the mouth. Slight puffiness at angles of jaws.

The physical examination of chest gave no abnormal signs, with the exception of a loud murmur with the first sound of the heart, loudest at left base, quite faint at apex; the murmur was propagated into the carotids. There was no enlargement of the heart nor accentuation of the second pulmonic sound. Neither spleen nor glands were enlarged. Pulse 120, respiration 36, temperature 101½°.

The blood was examined with great care by Dr. Cutler and myself, the *Compte-globule* of Malassez being used. The result was as follows: number of red globules to the cubic millimetre of blood, 714,145; number of white globules, 2911.[1]

Dr. Cutler was kind enough to report in regard to the condition of the corpuscles in the specimens examined by him as follows: "The red globules were paler than normal. The bi-concave contour was not preserved. There was not much variation in size between the indi-

[1] The number of red globules in health in an adult male is 4,500,000 to the cubic millimetre. The number of the white varies greatly; 5000 may be considered the average in health.

vidual globules. All were rather smaller than usual. There was not much detritus." A similar condition was found in the specimens examined by me. The white globules seemed abnormally granular, and were irregular in shape.

Examination of the urine showed nothing abnormal. No impairment of vision. Eyes not examined with ophthalmoscope.

Patient's condition remained the same for a fortnight. Bloody expectoration continued with little change, perhaps three ounces being expectorated during the twenty-four hours.

After May 14th, the following notes were taken: —

May 14th. Pulse 108, temperature 100⅘°. Two subcutaneous ecchymotic spots over tibia, as large as tip of finger.

May 16th. Puffiness at angle of jaw has disappeared; no œdema nor ascites.

May 17th. Much weaker, temperature 100°, refused all nourishment.

May 18th. Complained of severe pain in ear, and in abdomen; temperature 101°, pulse 122.

May 19th. Temperature 99⅘°. Refuses her food. Complains of severe abdominal pains. Restless during night, drowsy during day. Patient rarely speaks, but is conscious.

May 22d. Patient much excited during a violent thunder-storm. Had severe attacks of pain referred to different parts of body. There was a copious discharge of blood from mouth, said to have been a pint; Patient craves for different sorts of food, but rejects everything after the first mouthful, or vomits.

May 23d. Moves right arm and leg less easily than left; slight œdema at angles of jaws.

May 24th. Temperature 101°, pulse 120; right arm flexed and firmly contracted, right leg motionless. No loss of sensation, however. The "black and blue" spots on leg much larger. No emaciation. A slightly dusky tinge to face, some convulsive movements, no change in pupils. Patient unconscious.

May 25th. Died. No autopsy.

The treatment throughout, besides as stimulating diet as patient would bear, consisted in the administration of iron in some form. Tr. ferri chloridi, ferrum redactum, syr. ferri iodidi, were successively given and were all taken well by patient until the last few days. Fowler's solution was substituted for the iron two days before death, but was not, however, thoroughly tried. Quinine in one-grain doses was given. The only effect which could be fairly attributed to the iron was a blackening of the stools, as no improvement in the patient's condition occurred.

In the diagnosis of this case, phthisis is naturally suggested by the hæmoptysis and the fever. As, however, beside the spitting of blood

there was epistaxis and bleeding from the gums, indicating a hæmorrhagic state, as no abnormal physical signs were to be found in the lungs throughout the sickness, and as there was no emaciation or night sweats, a diagnosis of phthisis is not tenable. Much of the blood seemed to be hawked up, as if coming from the fauces or posterior nares.

The absence of enlargement of the spleen or glands would not exclude leucocythæmia. The course of the disease was, however, much more rapid than leucocythæmia ever is. Fever does not occur constantly in leucocythæmia, and, finally, examination of the blood proved a diminution of the white globules not to be seen in leucocythæmia.[1]

Progressive pernicious anæmia, a term first used by Gusserow and Biermer, and since generally adopted, is applied to a condition of "extreme anæmia terminating fatally in spite of the most nourishing treatment, for which no cause can be found (capable of explaining the malignity) either in the surroundings or physical condition of the patient."[2]

The disease is not a new one. Marshall Hall[3] described in 1839 a case of "fatal chlorosis," and Addison's[4] description of "idiopathic anæmia" makes it evident that the disease is the same as that described by Gusserow, Pepper, and others. Trousseau's case of "febris alba virginum,"[5] is probably identical.

An Italian, Corrazza, reported[6] a case of oligæmia, probably a case of pernicious anæmia. Gusserow, Biermer, Immermann, Zenker, King, Pepper, Phillips, and others have reported cases within the last few years. A case reported in the JOURNAL for January 14, 1875, by Dr. Chadwick, would seem to be a case of pernicious anæmia.

The affection is more common in women than in men; two of Pepper's cases were, however, adult males. It is more frequent after puberty, from the eighteenth to the fifty-seventh years; Quincke, however, reports a case at eleven years. Pregnancy is undoubtedly a predisposing condition.[7] The beginning of the disease is always gradual; characteristic of its course are absence of emaciation, extreme weakness, slight œdema or dropsy, which, however, according to Pepper, may be transitory. In a majority of cases hæmorrhages occur, either from the nose, gums, vagina, or uterus.

Capillary hæmorrhages in the retina always occur, according to Quincke, and capillary extravasations in the skin are common. Extremely loud anæmic murmurs are usual; the heart is sometimes slightly

[1] Uhle and Wagner.
[2] Ziemssen's Cyclopædia, Immermann, Progressive Pernicious Anæmia.
[3] Hall, Practice of Medicine, American Edition, 1839, page 369.
[4] Syd. Soc. Ed. of Addison's works, page 212.
[5] Clin. Med., iii. 70.
[6] Schmidt's Jahrbuch, 1872, Bd. 155, s. 333.
[7] Gusserow.

enlarged, but no valvular lesions occur. The urine is generally normal; albumen has, however, been observed in a few cases. An irregular fever is frequent. A temperature as high as 104° has been recorded,[1] there being no assignable cause. Usually, however, the temperature does not rise above 102°, and it may fall slightly below normal. (One of Quincke's cases.)

The prognosis is necessarily grave. Two recoveries are reported by De Cérenville.[2] Quincke reports two recoveries; one of these, however, died six months later with similar symptoms, and the diagnosis in the other case would appear doubtful from the report.

In regard to the pathology, a summary of recent observations can be found in the JOURNAL, October 22, 1874 (Dr. Fitz, Report on Pathology and Pathological Anatomy). Some later observers regard the fatty degeneration of the heart mentioned by Gusserow as a result and not a cause of the patient's condition.

Pepper considered the disease a medullary form of the pseudo-leukæmia (Hodgkin's disease, Trousseau's "adénie"), and found in one case change in the medulla of the tibia. This, however, does not seem to be constant, and is not reported in Pepper's second case.

Little can be said in regard to treatment. Transfusion has been tried in several cases, but without any marked benefit. Iron is not always well borne, and seems to be of little use. Cod-liver oil, iodine, arsenic, and phosphorus are all recommended, but from the reported cases little can be expected from their employment.

LITERATURE. — Pepper, American Journal of the Medical Sciences, October, 1875; Immermann, Ziemssen's Handbuch, xiii. 615; Quincke, Volkmann's Samml. klinische Vorträge, No. 100; King, British Medical Journal, 1871; Gusserow, Archiv für Gynaekologie, ii., 1871, 218; Biermer, Correspondenzblatt für Schweizer Aerzte, ii., 1872, No. 1; Zenker, Deutsches Archiv für klinische Medicin, iii., 1874, 348; Gfrörer, Memorabilien, xix. 3, page 116, 1874, Ponfick, Berliner klinische Wochenschrift, 1873, No. 1; Perl, Virchow's Archiv, Bd. 59; Perroud, Lyon Médicale, 1869; Cérenville, Bulletin de la Société de la Suisse, Rom., Mai., 1875, page 138; Phillips, Guy's Hospital Reports, third series, xviii. 159, 1873.

CASE OF RUPTURE OF THE SYMPHYSIS PUBIS DURING LABOR.

BY Z. B. ADAMS, M. D., OF FRAMINGHAM.

MRS. B., patient of Dr. H. Cowles, of Saxonville, forty-two years of age, primipara, medium height, well formed, spare, weight one hundred and ten pounds, arrived at full term of pregnancy on the morning of February 4, 1876. She had enjoyed fair health during gestation, although suffering from œdema of hands, feet, and legs for the last few weeks.

[1] Pepper.

[2] I have been unable to find the reports of these cases.

At this date there was a gush of liquor amnii, without pain or other warning. Seen by Dr. Cowles, the os was found undilated, parts soft and natural, no pains nor other signs of labor.

Twenty-four hours after (four A. M., February 5th), pains began. An examination showed a rigid os uteri, admitting the end of the finger. Micturition frequent. Pains moderate, not achieving much. Vertex presenting. Bowels moved during forenoon.

At 1.30 P. M. "pains more severe. Os one and one half inches in diameter, rigid. No advance of head. Vagina moist. Woman's condition good." Dr. Cowles gave antimony tartrate to emesis; also placed her over a vessel of hot water. At three P. M., "no advance of head. Os dilated to two inches, rigid. Pains somewhat severe, but achieving nothing."

I was called in consultation at 4.30 P. M. Found the condition as above described by Dr. Cowles's notes. Head high up, not movable. Vertex presenting, the occiput to the right acetabulum. Vagina moist. Os uteri two to two and a half inches, rather rigid. Pains ineffectual, not very severe, recurring every five to eight minutes. Patient's strength and condition good.

Advised the use of antimony tartrate per anum, and the application of forceps when the os should become more dilatable. After a time, the conditions appearing favorable, the pains expulsive in character, and the os dilating and dilatable, I applied the forceps under ether, taking the precaution to first empty the bladder. The forceps (Simpson's long) were with some difficulty adjusted obliquely upon the child's head, one blade behind the right ear, the other before the left ear, following Simpson's directions. During two hours thereafter, although the pains were regular, no progress was made, it being out of the question to employ any tractile force by reason of the condition of the os uteri, which, at each pain, clasped the shanks of the forceps as with a tight cord. The forceps were loosened between the pains, the locks being very carefully examined and adjusted at the commencement of each pain, when the grasp was tightened. The head, inclosed in the os and cervix uteri, was engaged in the brim. The child was alive, and the conjugate diameter of the pelvis seemed sufficient to allow the passage of the head if the os were dilated. Soon after six o'clock the ether was stopped, and it was not given again.

The forceps having been about two hours in place, at the commencement of a pain, the locks being adjusted, I requested Dr. Cowles to take the handles, that I might examine the parts at leisure, and assure myself that no injurious pressure was made upon the os uteri. A very severe expulsive pain coming on at this time, traction was made by Dr. Cowles in a backward-downward direction, when something gave way with a sharp crack, a noise sufficiently loud to be heard by all

in the room. Fearing rupture of the uterus, I looked at the woman. The countenance was good. No signs of collapse, no cramp, nor faintness. The os was rapidly dilating, labor going on, the head advancing at once, and pains continuing. A drachm of wine of ergot was given her, and a living child was born in about twenty minutes, with little help from the forceps, which were allowed to remain without change because the labor was progressing so well. During the short time that the head was in the pelvis there was some pain in the pubic region.

The placenta soon came away without unusual hæmorrhage or difficulty. The child, a boy, weighed eight pounds.

Immediately on the conclusion of the labor a full dose of ergot and opium was given. The pulse remained rapid through the night.

Next day she complained of soreness over pubes, but no pain except on motion. Passed water eighteen hours after the accident. Parts so swollen and tender that no examination was attempted. Opium was given. Incontinence of urine then began, and there was thirst and rapid pulse, but no symptoms of metritis or peritonitis at any time.

Four weeks after the accident, examined under ether, complete separation of the symphysis was found; a space of two inches between the ragged edge of the bone upon the right side and the torn ligament and fibro-cartilage of the left, with laceration of the anterior wall of the bladder, and rent into the vestibule. The urethra, entire, was very large, admitting one finger readily. This and the rent in the upper angle of the vestibule made it easy to thoroughly examine all parts of the bladder and symphysis. The posterior wall, fundus, and base of the bladder were uninjured. Vagina everywhere whole, although its rectal surface showed irritation from dribbling urine. The os uteri, rather high up, was healthy in feeling, and the sound passed into the fundus uteri two and one half to three inches without the slightest difficulty or appearance of uneasiness. The brim of the pelvis and the promontory of the sacrum, carefully examined, showed nothing abnormal. The unnatural condition of the bony parts made any measurement of diameters uncertain.

The experienced accoucheur may claim that the forceps should never be applied before the os uteri is fully dilated. Granted that this was wrong, it is difficult to explain what connection, if any, this could have with the occurrence of the accident. It is certain that the forceps never slipped, and that their situation upon the head, and their bearing upon the pelvic bones and soft parts of the mother, were repeatedly and carefully examined. Their place was never changed, nor any attempt made to alter it. They did not break, nor twist, and were withdrawn only with the child's head inclosed between the blades at the conclusion of the labor. No change was attempted, because it seemed impossible to improve upon their adjustment. An examination of the

child's head after birth, and recalling the position of the head in the brim at the time the instruments were introduced, showed that they were rightly placed. There is not a particle of evidence to show that any of the soft parts upon which they rested or impinged at any time were in the smallest degree contused, lacerated, or injured in function. The laceration of the bladder was confined to its anterior wall, and must have been made by the ragged edge of the bony symphysis, perhaps during the passage of the head. I am further assured by Dr. Cowles, who was holding the forceps at the instant when the rupture occurred, that he did not employ an unusual amount of force. The same is my own impression, confirmed by an examination of the forceps-marks upon the child's head, these marks being slight for instruments which had been kept two hours in place without change. There could have been no twisting or displacement of the instruments unperceived by me, as I was at the moment feeling with my finger around the shanks of the forceps, to determine the condition of the os uteri.

Rare as is this accident, and improbable as its occurrence appears (it is even declared by a very high authority to be *impossible*), we can hardly escape the conviction in this case that rupture of the symphysis pubis occurred during labor from pressure of the fœtal head, whether this pressure was due to the expulsive efforts of the womb, to traction by forceps, or to the mechanism of both these forces combined. It is possible that some exostosis, or some abnormal development, or some disease of the bones, may exist in this woman, but this is not proved, and certainly she is, or was, without evident deformity.

A recapitulation may be pardoned. A primipara, medium sized, well formed, forty-two years old. Liquor amnii escaped twenty-four hours before labor began. Head for several hours, say eight, fixed in the brim. Os rigid, undilated. Presentation vertex, second position. Bladder emptied, and forceps applied. Expulsive pains strong, and traction upon instruments in direction of axis of brim made at same time, the symphysis pubis gave way with a loud crack. Forceps did not break, nor slip, nor twist. Labor rapidly completed.

Woman and child now alive, June 17th. The former can get about the room a little. Child well.

Note. — While it seems very improbable that an operation so serious as symphyseotomy, or the Sigaultian section, should be suggested and performed upon grounds purely theoretical, it (symphyseotomy) would very likely occur to any one meeting a case, like this now cited, where tedious labor, from obstruction about the pelvic brim, terminated *cito et jucunde, si non tuto*, after accidental rupture of the symphysis pubis.

RECENT PROGRESS IN MEDICAL CHEMISTRY.

BY E. S. WOOD, M. D.

URINARY CHEMISTRY.

Alkaptonuria. — Since the publication of Fürbringer's case [1] another has been seen and described by W. Ebstein and J. Müller.[2] It now appears probable that the so-called alkapton is identical with brenzcatechin, a substance contained in the leaves of the *Ampelopsis hederacea*, and known also by the names pyrocatechin, oxyphenic acid, and metadioxybenzine. It can be obtained artificially by the destructive distillation of a number of vegetable extracts, such as catechu, kino, etc.

Ebstein and Müller's case was that of a healthy child, one and a half years old. The urine had all of the characteristics described in the case of Fürbringer, but the substance was isolated, and proved to be brenzcatechin by its crystalline form and all of its chemical reactions. It was isolated from the urine by evaporating the alcoholic extract, and shaking this residue with ether. The ether, upon evaporation, left the brenzcatechin together with hippuric acid in the crystalline form.

Modification of Boettger's Test for Grape Sugar. — Brücke [3] recommends a modification of this test which renders it in many respects preferable to Trommer's test for detecting sugar in the urine. When an alkaline solution of the sulphate of copper is used, as in Trommer's test, other substances besides sugar, uric acid for example, which exist in the urine, cause a reduction of the cupric oxide, when the fluid is boiled, a decolorization taking place, although there is no precipitation of the red oxide in the absence of sugar, unless the amount of the other substances is very large and the boiling is continued for some time. Another objection to Trommer's test is that the precipitation of the red oxide of copper, even when sugar is present in considerable amount, may be prevented by the presence of certain substances in the urine which hold it in solution. Trommer's test is, however, preferable to the bismuth (Boettger's) test as ordinarily employed, on account of the formation of the black sulphide of bismuth, when any organic sulphur compounds, such as albumen, pus, and mucus are present in the urine. This sulphide of bismuth cannot be distinguished by its appearance from metallic bismuth which is formed when sugar is present.

In order to obviate this objection, Brücke recommends the following modification: Instead of using subnitrate of bismuth, the potassio-bismuth iodide, one of the well-known alkaloid reagents, is employed. This reagent may be prepared by dissolving freshly-precipitated sub-

[1] The Journal, January 26, 1876, page 11.
[2] Virchow's Archiv, lxii. 554.
[3] Fresenius's Zeitschrift, 1876, page 100.

nitrate of bismuth in a hot, concentrated solution of iodide of potassium, to which a little hydrochloric acid has been added. The method of performing the test is as follows: Acidulate the urine or other fluid to be tested with hydrochloric acid, being careful not to add too much or too little acid. (Just enough acid should be added to prevent the formation of a precipitate or any turbidity when a drop or two of the reagent is added to an amount of water equal to that of the urine to be used in performing the test.) Then add an excess of the reagent, which precipitates any albuminous substance or sulphide present in the urine, filter, to the filtrate add an excess of liquor potassii, which throws down a white precipitate of the hydrate of bismuth, and boil. If the slightest trace of sugar is present, a black precipitate of metallic bismuth will be formed.

The only precautions to be taken in performing this test are to be sure that the liquid is boiled sufficiently, since in the presence of a small amount of sugar the reduction takes place with some difficulty, and secondly, to avoid the presence of too large an amount of the white hydrate of bismuth before boiling, since it might obscure the detection of a small amount of the black metallic bismuth after boiling. If, by chance, too much is present, it can be allowed to settle, and the supernatant fluid decanted into another test-tube, permitting only a small amount of the precipitate to flow in with it.

The bismuth test for sugar is, without doubt, the most delicate, but it is rarely used on account of the error which may be caused by the presence of a considerable amount of mucus or other albuminous substance in the urine. By the removal of this objection, as in the above process, it is much more delicate and certain than the copper test for detecting the presence of small amounts of grape sugar in the urine.

Acidity of Normal Urine. — Dr. Richard Maly [1] has performed some diffusion experiments to explain in part the acidity of normal urine. He finds that by placing in a diffusion apparatus a mixture of the mono-sodic (acid) and di-sodic (alkaline) phosphates, the acid phosphate passes through the membrane much more rapidly than the alkaline, so that while the fluid within the dialysor has an alkaline reaction, that without has an acid one. This is virtually what takes place in the kidney. The blood contains both of these phosphates of sodium, the di-sodic phosphate being constantly deprived of a part of its sodium by uric, hippuric, lactic, and other acids which are produced by the metamorphosis of the nitrogenous tissues. The mono-sodic phosphate thus formed then readily diffuses from the blood to the urine, and imparts its acid reaction to that fluid, while the principal part of the di-sodic phosphate remains in the blood.

[1] Berichte der deutschen chemischen Gesellschaft, 1876, page 164.

TOXICOLOGY.

Arsenic. — Experiments have been undertaken by M. D. Scolosuboff[1] to determine the localization of arsenic in the different tissues of the body in cases of acute and chronic arsenical poisoning, and also to explain, if possible, the cause of the paralytic phenomena in the chronic form of poisoning, of which two cases are reported in detail.

The method used for determining the amount of arsenic in the different tissues was that recommended by M. A. Gautier,[2] which he considers to be far more reliable and accurate than any other in use up to the present time. The method is so delicate that arsenic could be detected in only two grammes of the spinal cord of an animal poisoned with arsenic. He finds that in acute poisoning in animals the arsenic is localized chiefly in the brain, and in chronic poisoning it concentrates itself in the brain and spinal cord, going afterwards to the liver and muscles, and it is found in these tissues to so great an extent as in the nervous tissues only after it has been removed from the latter by the circulation.

The experiments were made upon dogs and rabbits, and it was found that dogs could take very large amounts of arsenic daily for a long time without producing any abnormal change in the tissues of the liver or muscles, although after death comparatively enormous amounts were found in the brain and spinal cord. In one case of chronic poisoning the brain and cord contained about four times as much arsenic as an equal weight of the liver, and thirty-six times as much as the muscular tissue. In a rabbit 2.15 grammes of the cord gave a distinct arsenical ring, while 38 grammes of the liver and 64 grammes of muscle failed to give any reaction; 100 grammes of the brain yielded 0.0594 gramme of metallic arsenic. In a case of acute poisoning 100 grammes of the brain of a dog, which had been killed by the subcutaneous injection of 0.1 gramme of white arsenic, yielded 0.00117 gramme of metallic arsenic, while 200 grammes of the liver gave so slight a ring that it could not be weighed.

From this fact that the arsenic in cases of poisoning is located chiefly in the nervous tissues, the author considers that the paralyses often noticed in cases of acute and chronic arsenical poisoning are due to changes in the nervous centres, and that we must not look to the muscles for an explanation of the muscular atrophy which is frequently observed. In the same way the vertigo, syncope, and convulsive attacks may be explained, as well as the abnormal sensibility and the mal-nutrition of the skin and tissues as manifested by the œdema, low temperature, and eruption.

[1] Annales d'Hygiène, January, 1876, page 153.
[2] The Journal, January 13, 1876, page 39.

The author reports in detail two cases of arsenical paralysis observed by him in the hospital at Moscow. The important symptoms in these were that the arsenical paralysis attacked exclusively the extremities, especially those parts most distant from the heart; there was alteration of every kind of sensibility, extreme muscular atrophy with total loss or diminution of the reaction of the muscles to both the faradaic and galvanic currents, and alteration in the circulation of the blood and nutrition of the limbs, shown by the diminished temperature, œdema, change in the color of the skin, etc. Even gangrene has been observed in other cases. These symptoms are most marked in the feet and hands, next in the leg and fore-arm, and least in the thigh and arm.

The analogy in the physiological action of arsenic, antimony, and phosphorus has been investigated by Prof. C. Gähtgens,[1] who finds that compounds of both arsenic and antimony have the same physiological action that phosphorus does, namely, a largely increased metamorphosis of the nitrogenous substances in the body, and marked fatty degeneration of many of the organs. The amount of nitrogen in the urine of a dog fed with the arseniate of sodium rose in nine days from 4.4 to 8.7 grammes, the amount of the arseniate given daily varying from 0.10 to 0.25 gramme. In the case of antimony the amount of nitrogen in the urine rose in one case in two days from 3. to 6.9 grammes after the administration of 0.22 gramme of tartar emetic upon the first, and 0.28 gramme on the second day. These three elements, so closely allied chemically, are, therefore, analogous in their physiological action also.

(To be concluded.)

THE JOURNAL OF SOCIAL SCIENCE.[2]

One of the contributors to the journal which lies before us quotes from Mr. J. S. Mill the following definition of social science: "Next after the science of individual man comes the science of man in society, of the actions of collective masses of manhood, and the various phenomena which constitute social life. It is but of yesterday that the conception of a political or social science has existed anywhere but in the mind of here and there an insulated thinker, generally very ill prepared for its realization; though the subject itself has of all others engaged the most general attention, and been a theme of interested and earnest discussions, almost from the beginning of recorded time." According to this comprehensive definition, social science includes within its limits everything which pertains to the development of man in society. And this

[1] Centralblatt für die medicinischen Wissenschaften, 1875, page 529, and 1876, page 322.

[2] *Journal of Social Science, containing the Transactions of the American Association.* Number viii. May, 1876. Published for the American Social Science Association by A. Williams & Co., Boston.

covers so wide a ground that it is difficult to say what it does not include. All matters of sanitary science, all questions of politics, whether municipal or national, the mutual relations of labor and capital, the administration of law, the complex problems of pauperism and crime, the discipline of prisons, the management of hospitals and of schools, are among the subjects which, according to the above definition, are included within the domain of social science. True to this definition, the American Social Science Association declares, in its constitution, that its object is "to aid the development of social science and to guide the public mind to the best practical means of promoting the amendment of laws, the advancement of education, the prevention and repression of crime, the reformation of criminals, and the progress of public morality, the adoption of sanitary regulations, and the diffusion of sound principles on the questions of economy, trade, and finance. It will give attention to pauperism and the topics related thereto, including the responsibility of the well-endowed and successful, the wise and educated, the honest and respectable, for the failures of others." The obvious difficulty in the way of any society or association which undertakes to grapple with so many and such vast problems is the extent, complexity, delicacy, and importance of the subjects which it proposes to investigate. Where so much is undertaken, the work which is done is apt to be superficial. But notwithstanding this inherent and great difficulty we are glad to believe that the American Association, like the British one of the same character, has commenced its work under favorable auspices, and already accomplished no little good.

The varied contents of the present journal reflect the extent of the territory which the association has undertaken to survey, and the multiplicity of its labors. A glance at the contents will justify this remark. The first article, by the Hon. David A. Wells, is a discussion of the influence of the production and distribution of wealth on social development. The subject is treated with the intelligence and clearness which the reputation of its author would lead us to expect. He illustrates and enforces the conclusion, which both common sense and philanthropy indorse, that the interests of labor and capital are not mutually antagonistic, but mutually helpful, and that if no artificial restrictions are laid upon them, their natural development tends to equalize the distribution of wealth throughout the community.

The second article is a report, by Mr. F. B. Sanborn, on the past and present work of social science. It gives a fair account of what the association has done. It is not difficult, however, to trace in the article the ideas of a doctrinaire, rather than those of a scientist or statesman. The third article, by James B. Angell, LL. D., President of the University of Michigan, treats of the progress of international law. The author presents us with a hopeful view of his subject, but fortunately does not indulge in any utopian dreams of the speedy disarmament of the world, and the immediate advent of universal and perpetual peace.

Mr. Dorman B. Eaton relates in the fourth article the history of the experiment of civil service reform in the United States. A sad story it is, for it describes the deliberate abandonment, by a great nation, of a plan which it had inaugurated for the reform of its gravest abuses. The president and both

houses of Congress are shown to have commenced, and then to have renounced, in obedience to the demands of selfish ambition and greed, and with an utter disregard of the best interests of the nation, an attempt at reform which the whole people had regarded with unfeigned satisfaction and equal hope.

The proper treatment of the guilty is the subject of the fifth article, in which its author, the Rev. W. G. Eliot, of St. Louis, insists briefly but clearly upon the necessity of absolute justice and impartiality in the treatment of criminals. It is pleasant to notice that he regards the protection of society as secondary to the comfort and reformation of the criminal. He would have the latter reformed, if possible, but at any rate would take care that society was protected against the wrong-doer.

The sixth article is of greater interest to the medical profession than any of the others. It contains two papers upon the health of the pupils of our common schools: one by Dr. D. F. Lincoln, of Boston, upon the nervous system as affected by school life; and the other by Dr. J. J. Putnam, of Boston, upon gymnastics for schools. Both of these papers are excellent in their way. That of Dr. Lincoln is the longer of the two, and is an intelligent discussion of a sanitary question of vital importance. While it points out the fact that pure mental work, like other occupation, tends to develop and strengthen the human system, it asserts with justness and force that such work should not be insisted upon to the exclusion of the methodical and appropriate exercise of other parts of the body. This is an important truth, and one to which unfortunately very little attention is paid. We trust that the Social Science Association will continue their investigations in this direction until some of the glaring defects in our public-school system are exposed and remedied.

The seventh article is a picture, and not a very agreeable one, of the recent financial policy of the United States as contrasted with that of England. In the eighth article the Hon. Emory Washburn endeavors to define the limitations of judicial power, with a special reference to the Supreme Court of the United States. The important matter of life insurance for the poor is explained by Mr. Elizur Wright in the ninth article. We wish that the author could have treated his subject in a manner somewhat more intelligible to the average American mind. The tenth and last article, by Prof. W. G. Hammond, of the University of Iowa, gives an interesting account of legal education and study of jurisprudence in the West and Northwest. It shows to what an extent the science and practice of the law have been modified in that region by novel conditions and rapid material development. E. H. C.

REPORT FOR SUFFOLK DISTRICT MEDICAL SOCIETY, 1875–76.[1]

A. L. MASON, M. D., REPORTER.

Among "subjects of local interest connected with the practice of medicine" in Suffolk district is the increasing use of antipyretic agents in the treatment of

[1] Read before the Massachusetts Medical Society, June 13, 1876.

fevers, and, as being the most recent remedy of this class, salicylic acid in connection especially with the treatment of typhoid fever and acute articular rheumatism.

The experience of Brand, Jürgensen, Traube, Ziemssen, Liebermeister, and many others, during the past ten years, in Germany, has shown that many of the severer symptoms of typhoid fever may be modified, and the death-rate materially lowered, by the systematic reduction of the bodily temperature by means of cold baths, quinine, alcohol, digitalis, veratrum viride, and finally by salicylic acid. Statistics of many thousand cases appear to show that the mortality from this disease is not more than one half as great under the antipyretic treatment, strictly carried out, as it was formerly under the expectant plan. As an average result we may quote the statistics of Liebermeister. At the hospital at Basle, out of one thousand seven hundred and eighteen cases treated indifferently in former years, twenty-seven per cent. were fatal. Of one thousand one hundred and twenty-one cases treated by the antipyretic method, eight per cent. died. Other observers give even more favorable results. In continued fevers a prolonged elevation of the temperature to an unusually high point is considered to be the chief cause of danger, from the tendency to paralysis of nerve centres and cardiac debility resulting, with risk of fatal syncope, heart clots, or hæmorrhagic infarction in the lungs.

It has been observed that a morning temperature of 106°, even if occurring but once in the course of typhoid fever, has been followed by death in more than one half the cases observed, whereas but about ten per cent. of the cases in which the temperature remained at 104°, or below, died. The treatment in these cases was expectant.[1] As long remissions are considered of favorable import in the ordinary course of typhoid fever, so these remissions are to be artificially sought, and whatever remedies may be used, they are found to be most effectual if brought to bear at the periods of lowest temperature, thus prolonging the natural remissions, and counteracting the tendency to frequent exacerbations.

A cold bath of from ten to twenty minutes' duration at 68°, given as often as the temperature rises to 102° or 102½°, appears to be the most efficient means of abstracting heat, and the gradually cooled bath of Ziemssen is the form which seems most available in this community. Although the enthusiastic predictions of Brand in 1861 have not been fully realized, and there are many cases of typhoid fever in which thorough bathing is impossible or inadmissible, the efficiency of this mode of treatment should not be undervalued. Hæmorrhage from the bowels and feeble action of the heart are contra-indications to the use of cold baths, and there are various other reasons which often make this treatment unavailable with us, so that the simpler plan of reducing the heat-production by means of anti-febrile drugs, with occasional baths, or the use of a cold-water bed, is found to be more generally useful here.

Of such remedies sulphate of quinia is the most trustworthy. Given in doses of from twenty to forty grains, *at once* or within an hour, the temperature may be reduced in most cases several degrees, sometimes to the normal point or below, in the course of twelve hours, slowly rising again. Divided doses

[1] Liebermeister, four hundred cases.

are not to be relied upon to produce the same effect. If the first dose produces little or no fall of temperature, it is to be increased on the following day, but as cinchonism to a disagreeable degree is often present, it is usually desirable to have an interval of forty-eight hours between the doses. If there is vomiting the dose may be repeated, or injected into the rectum, as in some cases of coma, but enough cannot be given subcutaneously. It is usually found that after the first time a diminished dose suffices to produce the desired fall.

With regard to the toxic effects, Liebermeister states that he has given twenty to forty-five grain doses of quinine in one thousand five hundred cases of typhoid fever alone, and in all more than ten thousand single doses, without ever observing any permanent injury attributable to the drug.

Digitalis in ten to twenty grain doses, or a drachm or more of the tincture in divided doses through the day, sometimes acts as a powerful febrifuge when other remedies fail, but it is not entirely safe, and its action is slower. Traube,[1] who investigated this drug most carefully, states that from thirty-six to sixty hours elapse after administrations before the minimum temperature is reached. It is not to be used in cases of cardiac debility, since it is not found to strengthen the heart's action, as it might be supposed to do from the effect on some cases of cardiac disease.

Veratrum viride, or veratria in doses of one twelfth of a grain given every two hours for three or four doses, usually produces a decided fall of temperature, but the nausea, vomiting, and collapse which may follow the use of this drug, as well as that of digitalis, make the most careful watching necessary in both cases. A few fatal instances are reported.

Within the last year salicylic acid has been used to a great extent as an antifebrile remedy, chiefly in Germany, where the results obtained by a large number of careful observers have been in the main unanimous and satisfactory. For internal use the acid must be pure, perfectly white, and almost odorless. The brownish or yellowish tinge which the imperfectly bleached acid has is due to carbolic acid and other impurities, which render it too irritating for internal use. As a febrifuge the dose is from sixty to seventy-five grains given *at once* suspended in water or syrup, or in wafers. This dose may be repeated on the same day if necessary. On account of the insolubility of the acid, the salicylate of soda, which is quite soluble, is found to be a more convenient form for administering the drug, and equally efficacious.

In many hundred cases of acute febrile diseases which are reported, chiefly typhoid fever, acute rheumatism, pneumonia, phthisis, and erysipelas, a decided fall of temperature has been observed in more than ninety per cent, of the cases after from sixty to seventy-five grains of the acid. The remission usually begins within three or four hours of the dose, the temperature falling gradually from one to several degrees, often to the normal point, rising slowly again for twelve to twenty-four hours, when a small dose of thirty to fifty grains often suffices to continue the remission. The susceptibility varies in different persons and at different ages. For children under a year five to seven grains is considered a suitable dose, though much larger amounts seem to be borne. So in adults several drachms have been given daily without injury.

[1] Traube, Gesammelte Beiträge zur Pathologie und Physiologie, ii. 203.

In a moderate case of typhoid fever one dose every day for the first ten days, continued every other day for ten days more, is often sufficient to keep the temperature near the normal point. A dose given at noon will often reduce the evening temperature below the morning's. The action on the bowels is favorable. That is, the tendency to diarrhœa is checked. The pulse often becomes stronger, though the frequency may not be diminished. The effect on the respiration and sensorium is not so beneficial as that resulting from cold baths. In about one half the cases there is profuse perspiration, often beginning within fifteen minutes of the dose, and these cases are observed to fall most in temperature. In about fifteen per cent. of cases vomiting occurs, which sometimes prevents the use of the drug, though this may often be relieved by a few drops of chloroform. The result of injections of salicylic acid into the rectum is not satisfactory.

In forty per cent. of cases, after a dose of from sixty to ninety grains, there is ringing in the ears, occasionally deafness, sometimes dimness of vision, faintness, and headache. In feeble persons collapse may occur, but only one observer[1] mentions a fatal case, which occurred in the fifth week of typhoid fever.

With regard to the action of salicylic acid on the mucous membrane of the stomach and intestines there is a difference of opinion, most autopsies reported showing no lesion or irritation after prolonged use of the drug. Wolffberg (Ziemssen's clinic), however, mentions two autopsies where erosions were found in the mucous membrane of the stomach and duodenum; also in the large intestine of a dog which had had an enema of thirty grains of salicylic acid in about an ounce and a half of water. H. Köhler[2] (Halle), on the other hand, in some twenty post-mortem examinations of animals which had been experimented on with this drug, found no trace of hyperæmia in the stomach, intestines, or kidneys. He also concludes as the result of his experiments that salicylic acid is the most powerful antipyretic of modern therapeutics. Fürbringer and Schültze[3] (Heidelberg) mention three cases of severe dyspnœa, and two cases of acute nephritis, with considerable blood and casts in the urine, which disappeared on disuse of the drug. Cases of inflammation of the mucous membrane of the pharynx after the use of a gargle containing salicylic acid are not rare. Two cases are mentioned where one part to one hundred of glycerine had this effect (Fränkel).

In intermittent fever[4] salicylic acid appears to have a specific effect in mild cases, but is not to be compared with quinine.

The relative antipyretic effect of salicylic acid and quinine was tested by Riegel (Köln),[5] who gave to the *same* patients, at about the same period of typhoid fever, often on the same day, at equal elevations of temperature, thirty grains of quinine and sixty grains of salicylic acid alternately, and found that the latter was slightly more effectual in reducing the temperature, and

[1] Goltdammer, Berliner klinische Wochenschrift, No. 4, 1876.
[2] Centralblatt für die medicinischen Wissenschaften, No. 11, 1876.
[3] Deutsches Archiv, February 25, 1876.
[4] Hiller, Deutsches Archiv, December 10, 1875.
[5] Berliner klinische Wochenschrift, No. 15, 1876.

could be oftener used. The minimum temperature after quinine came somewhat later, and the remissions lasted rather longer.

With regard to the cost of the two drugs here, Squibb's acid, which is better than the imported, is about one fourth the price of sulphate of quinine at present.

Acute Rheumatism. — In forty cases of acute articular rheumatism treated with salicylic acid during the past spring, in Suffolk district, many of which are reported in the JOURNAL, with doses varying from five to fifteen grains every hour, sometimes once in three or four hours, defervescence, with relief from painful symptoms, occurred in eighty-five per cent. of cases after an average period of two and one half days. Fifteen per cent. were not benefited, or could not take it.

In thirty-three cases reported in different journals elsewhere, there was relief after an average use of the drug for thirty-six hours. Relapses often occur, so the acid should be continued in smaller doses into convalescence. The favorable results in Traube's wards, in Berlin, in fourteen cases of rheumatic fever, led to the assertion that by the use of salicylic acid "the duration of acute symptoms can with certainty be limited to a few days." (Stricker.) This does not appear to be universally true, though in many fresh cases coming early under treatment the disease seems to be cut short. This supposed curative power is probably not due to any antiseptic influence, as the same result is obtained by the use of salicylate of soda, which is not antiseptic, except in a slight degree from the small amount of free acid contained in it.

Salicin. — Salicin, the active principle of the willow, which has formerly been in use as an antiperiodic, has lately been advocated as a valuable remedy in rheumatic fever. It has been used since 1874 by Dr. Maclagan [1] (Dundee), on the supposition that rheumatic fever is of malarious origin, in doses of from ten to thirty grains every two or three hours. Several cases are reported by Dr. Maclagan and others in which the disease is said to have been arrested in from twenty-four to forty-eight hours. Salicin is not very soluble, but may be given suspended in water. The advantages claimed over salicylic acid are that it is not impure nor irritating, and may be given in smaller quantity with the same effect. It is said that there are no disagreeable after-effects. The results from the use of this remedy in the Suffolk district are not yet available.

With regard to the efficacy of febrifuges in general it is to be noticed that as the high temperature in fevers is only one, though in some cases the chief, dangerous element in the diseases, so the abstraction of warmth by baths, and the diminished heat-production which follows the use of antifebrile drugs, can only be regarded as bringing the diseases to a certain extent within control in so far as the most exhausting symptom is concerned. It cannot be said that there is any curative effect or curtailment of the natural limits of the fevers in question, though mild cases of typhoid fever sometimes appear to run a shorter course.

The action of salicylic acid in rheumatic fever may perhaps be excepted, as being specific as well as antipyretic.

The administration of calomel as an eliminative during the first week or

[1] London Lancet, March 4 and 11, 1876.

ten days of typhoid fever is also claimed, with reason, as possibly curative. Traube, Wunderlich, Liebermeister, and others have found a transient fall of temperature following doses of from four to ten grains of calomel, repeated perhaps several times in the course of the first week, and in some cases it appears to shorten the disease. Liebermeister found that in two hundred cases treated early with calomel the death-rate was decidedly lower than usual. Whether it is better than other cathartics is not known.

LITERATURE. — Brand, Heilung des Typhus. Berlin, 1861 and 1868. Jürgensen, Behandlung d. Abdom. Typhus mittelst des kalten Wassers. Leipzig, 1866. Ziemssen and Immermann, Kaltwasser-behandlung d. Typhus Abdom. Leipzig, 1870. Liebermeister, Typhoid Fever, in Ziemssen's Cyclopædia, vol. i. Buss, Deutsches Archiv für klinische Medicin, Band xv. Ewald, Practitioner, March, 1876. Binz, Practitioner, April, 1876. Riess, Stricker, Moeli, Goltdammer, Senator, and others, Berliner klinische Wochenschrift, December to April, 1875–76. Jahn, Allgemeine medicinische Central Zeitung, No. 6, 1876. Senator, Centralblatt für die medicinischen Wissenschaften, No. 14, 1876.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

O. W. DOE, M. D., SECRETARY.

APRIL 17, 1876. *Masturbation in Women.* — DR. CHADWICK read a paper upon the subject. (Reserved for publication.)

Foreign Body in the Rectum. — DR. J. G. BLAKE showed a fish bone an inch and a quarter in length which he had extracted from the anus of a male patient. Dr. Blake mentioned that some years ago he had shown a similar specimen.

Salicylic Acid in Rheumatism. — DR. BLAKE spoke of the good results he had recently obtained by the use of salicylic acid in rheumatism. One case was that of a little girl relieved in twenty-four hours, who suffered no relapse. Another case was that of an old gentleman who took ten grains every hour for twenty hours, with entire relief, and afterwards had only a slight recurrence of the pain.

DR. EDES said he had met with remarkable success recently in the use of this drug in cases of rheumatism at the City Hospital. He had found that relief followed very soon after commencing the use of remedy, and that very few relapses occurred.

DR. C. P. PUTNAM reported a case of rheumatism with cardiac complications, where two drachms of salicylic acid had been taken during the night with entire relief of pain after sixteen hours. The patient had marked tinnitus aurium, but no vomiting. Dr. Putnam inquired if it had been generally noticed that the temperature fell in about four hours after the cessation of the pain.

DR. BLAKE said he had noticed it in most of his cases.

DR. BOLLES mentioned the case of a patient who, after having suffered four weeks from rheumatism, had obtained marked relief in twenty-four hours by the use of this remedy; another patient, suffering from a relapse, wholly recovered in a few days after commencing the use of the acid.

MAY 1, 1876. *Sanitary Condition of the City Hospital.* — DR. COWLES read a paper upon the subject. (Reserved for publication.)

DR. H. I. BOWDITCH questioned the possibility of making the hospital, even with all the most approved internal arrangements for ventilation, etc., satisfactory in its sanitary condition, on account of its location. He considered both the Massachusetts General Hospital and the City Hospital to be built upon sites radically bad. In any hospital Dr. Bowditch thought it doubtful if good ventilation could be obtained excepting by a large chimney in the centre of the wards, with open fire-places. He would be glad to see all the hospitals removed on to the hills in Roxbury.

DR. C. F. FOLSOM referred to the disadvantage in large hospitals of having the heat driven underground, passing, as it necessarily must, among drains and water-pipes which are continually getting out of order, and so rendering the air impure. He had never yet seen a hospital so constructed as to prevent the odor from the lower wards being noticed in the passage-ways above. He thought even Dr. Kirkbride's insane asylum in Philadelphia, though admirable in its internal sanitary arrangements, would be found to exert an unfavorable influence upon surgical cases. Dr. Folsom added that our experience had been noticed abroad by Virchow and Langenbeck, so that the new hospitals of Berlin, Leipzic, and Dresden are built of one story.

DR. CHADWICK saw no objection against the situation of the two hospitals, provided they were built upon concrete foundation, and referred to the absence of bad odors in residences upon the new land where a better gravel had been used in filling in. Statistics of operations performed at the Massachusetts General Hospital, which he published some years ago, showed better results than had ever been previously published. He thought a change of air in the wards might be obtained by the use of heated chimneys.

DR. FISHER remarked that in the investigations made by him some years ago in insane asylums, he disapproved of the use of vans as a means of ventilation, but thought very favorably of the system of heated chimneys. Dr. Fisher mentioned a case of erysipelas arising from the contamination of air by sewer-gas entering through the cold air box of the furnace, the foundation of which had become undermined.

DR. WEBBER referred to the filling-in about the Massachusetts General Hospital, which he thought could not but exert a very deleterious influence upon its sanitary condition.

DR. CHADWICK remarked that he thought his statistics, previously referred to, disproved the fact of poisonous emanations arising from the soil sufficient to affect the air about the hospital.

Pressed Corned-Beef. — DR. DURGIN showed a specimen of pressed corned-beef which had recently caused severe illness in different families. In one family, consisting of four adults and two children, the beef was partaken of at seven o'clock, and all were seized with violent vomiting within four hours. He had heard of four or five other families similarly affected. The symptoms were severe vomiting followed by diarrhœa, and in some cases gastritis with a burning sensation in œsophagus. In one case there was marked prostration. The urine showed no special change. Dr. Durgin said the beef was cooked,

pressed, and then wrapped in tin-foil, and packed by Messrs. Culver and Smith, in Chicago. It first appeared in the market here six weeks ago. One gentleman who had sold it for three weeks had heard of no ill effects from it until within four days.

Dr. Whittier remarked that the meat had the appearance of having been too freely treated with saltpetre, which may have been the cause of the illness rather than a change in the meat. The symptoms which he had noticed were nausea, vomiting, and purging after from ten to twelve attacks of vomiting, followed by pain and burning sensation in stomach and œsophagus.

Dr. Fitz stated that the disease was not limited to Boston proper, as a case had been met with in West Roxbury.

Dr. Inches alluded to the fact that in summer many butchers add saltpetre to their meat in order to preserve it.

THE AMERICAN MEDICAL ASSOCIATION.

In our comments upon the meeting of a year ago, we expressed a hope that the signs of renewed vigor and the elevated tone of the discussions might promise a greater usefulness in the future. The meeting of the present year can hardly be said to have come up to the expectations then formed. The choice of the place of meeting seems to have exerted an unfavorable influence upon the work of the association, which suffered greatly from the vastly superior attraction of the great exhibition. The attendance at the various sections was, as has been shown by our reports, unusually small; indeed, in some, little or no work of importance was accomplished. This fact augurs ill for the International Congress, which will be held under similar disadvantages. Whether or not the organization of the latter, or the advantage gained by experience, will enable those who have it in charge to conduct the meeting more successfully remains to be seen.

The address of the president, Dr. Sims, was not of as high an order of merit as we had a right to expect from one of his ability, and we regret to say that the topics discussed by him seem to be most unhappily chosen, considering the unusual opportunities which were offered this year for an address creditable to the speaker and the association. The great topics of the day were briefly passed over, and the main portion of the address was devoted to the discussion of two subjects, the code of ethics and the hygienic treatment of syphilis, both of which required great delicacy of handling and the exercise of sound judgment and common sense. We cannot avoid expressing great disappointment at this effort of the distinguished New York surgeon; we feel sure that Massachusetts will be far more ably represented at the next meeting than South Carolina has been in the one which has recently been held.

If we may judge from the many complaints expressed by those who attended the meeting, it was not wholly owing to the presence of the greater attractions that the meeting was so poorly supported by the members of the association. The arrangements of the executive committee appear to have

been wholly inadequate to the occasion. The responsibility for this shortcoming rests with the permanent secretary, at whose door also may be laid the many irregularities in the manner in which the business of the association was conducted. The association evidently felt that its trusty servant had not received sufficient encouragement in the past, and adopted the most shrewd, if not the most just expedient of an increase of salary. We trust there will be a corresponding increase of executive ability.

We regret to find so much to criticise, and fear we shall be classed by the more enthusiastic among the chronic grumblers. We are not without hope, however, for the future, and we doubt not that, under the able leadership of so generally popular a president as Dr. Bowditch, the meeting at Chicago next year will stand out in striking contrast.

THE NEW HAMPSHIRE MEDICAL SOCIETY.

The eighty-sixth annual session was held in Concord, June 20th and 21st, and from the full attendance of both old and new members, as well as the apparent interest taken by every one, it was evident that the association had not lost its original vigorous organization, but is still working for the promotion of science and the elevation of the standard of medicine.

More than one hundred of the profession of the State were present, and the Massachusetts society was ably represented by its ex-president and delegates Perley of Lynn, Holmes of Lexington, and Renton of Boston. Dr. Cotting was elected an honorary member, and responded in a happy manner.

The session on Tuesday was nearly ten hours, with only a short intermission for the anniversary dinner.

The exercises consisted in the reading and discussion of papers, the report of committees, and the report of special cases.

Dr. Child, of Bath, then read a report upon the Practice of Medicine, and Dr. Graves, of Warner, read a paper upon Sanitary Statistics.

Dr. Pray, of Dover, read a full and able report upon Gynæcology.

Dr. Wilkins, of Manchester, followed with a paper upon Puerperal Convulsions.

Dr. Carr, of Goffstown, read a paper upon Epilepsy.

Dr. Kingsbury, of Lyme, from the committee upon necrology, read a biographical notice of the late Dr. Smalley, of Lebanon.

Dr. George A. Crosby, of Manchester, a delegate to the National Medical Association, made a full and interesting report.

Dr. Chase, of Peterborough, read a very exhaustive paper upon Medical Progress in New Hampshire during the past century.

The session opened at eight o'clock on Wednesday morning, with a very full attendance. A paper was read on Typhoid Fever in Phillips Academy, Exeter, by Dr. Hoyt, of Grafton. A paper was also read by Dr. Hill, of Dover. A committee was appointed to appear before the legislature with reference to the enactment of a bill to establish a State Board of Health. Cases were reported by Drs. Webster, Parsons, Parker, Russell, Downs, and Crosby.

That of Dr. Parsons was a case of effusion into the left pleural cavity, with complete compression of the lung, that had been relieved by the use of the aspirator, twenty-five times in the past three months, about six gallons of fluid having been removed in that time. The patient appeared before the society for examination.

Considerable general business was transacted.

A delegation of members went to Pittsfield to attend the funeral of the late Dr. Richard P. J. Tenney, ex-president of the society.

The following officers were elected: —

President, A. B. Crosby, Hanover; Vice-President, L. M. Knight, Franklin; Secretary, G. P. Conn, Concord; Treasurer, Thomas Wheat, Manchester; Anniversary Chairman, James H. Wheeler, Dover; Board of Censors, W. D. Chase, Peterborough; C. H. Boynton, Lisbon; G. B. Twitchell, Keene; N. G. Brooks, Charlestown; C. F. Kingsbury, Lyme; G. E. Hersey, Manchester; E. F. McQuesten, Nashua; C. P. Frost, Hanover; John W. Parsons, Portsmouth; S. W. Roberts, Wakefield.

MEDICAL NOTES.

— We are requested by the committee on the Boylston Medical Prizes to ask the author of a dissertation on Hospital Construction bearing the motto, "Mille mali species, mille salutis erunt," to communicate with the secretary. The committee considered this article an exceedingly valuable contribution to the subject, and regret that their ignorance of the writer's name prevents them from urging upon him personally its publication.

— Ulcer of the frænum linguæ as a new symptom of whooping-cough is described in a communication by Thomas Morton, M. D., to *The British Medical Journal* of June 10, 1876. For the purpose of ascertaining whether ulcers of the frænum of the tongue might not be present in a variety of conditions, Dr. Morton examined one hundred consecutive cases, most of them in children, of a variety of diseases, and in only two cases did he find an ulcer of the frænum, while in both there were suspicions of whooping-cough. He then examined eighty-one cases of whooping-cough, and found well-marked ulcers in thirty-three, or nearly forty-one per cent. Of forty-one cases which he was able to observe pretty continuously, an ulcer was found in twenty-five, or sixty-one per cent. He thinks it may be regarded as proved that a small white ulcer of the frænum linguæ, either round or forming a transverse furrow, is a symptom characteristic of whooping-cough, which is observed in fully half the cases, being found most frequently during the third, fourth, and fifth weeks, but occasionally appearing as early as the first or as late as the eighth week.

— There is no doubt but that etherization is slowly gaining ground in Europe, and that the day is approaching when chloroformic anæsthesia will be a thing of the past. Meanwhile it is interesting to note the important defections which are continually taking place from the ranks of the chloroformists. Mr. Pallock, of St. George's Hospital, is known to be a most ardent advocate of etherization. Sir James Paget, writing in 1875, says, "For the last two years I have used only sulphuric ether, or, for short operations, nitrous oxide

gas or ether spray." Sir Henry Thompson, who used generally to dispense with anæsthesia during lithotrity, now has his patients etherized by Clover's system, which consists in the use of nitrous oxide, followed by ether. "The rapidity and greater safety of the process," he says, "as compared with that by chloroform, together with the freedom from subsequent sickness usually attained (the latter an advantage of no slight value), have influenced my practice, and I now make anæsthesia the rule and not the exception." Professor Vulpian, of Paris, the eminent experimental physiologist, prefers ether for anæsthesia in vivisection, no doubt from motives of economy, as well as for reasons of a more scientific nature. Speaking of the sudden death of a dog which had been chloroformed for purposes of experiment during a lecture, he says, "This accident is so liable to occur when chloroform is used to produce insensibility in animals about to be experimented upon, that we almost always use sulphuric ether, of which the action is much less dangerous, and less treacherous."

— The *Index* is a weekly journal devoted to free religion. Whatever difference of opinion may exist concerning the free religious movement, the course of the *Index* is, on one point which relates to medicine, most commendable and unselfish. We refer to its refusal to admit quack advertisements to its columns, a refusal which sectarian religious journals can rarely be credited with. In this connection we copy the following from the *Index* of June 1st: —

"The New York *Sun* is sometimes reckless and over-sharp, but in this paragraph it flies like an arrow to its mark: 'Advertisements of patent medicines furnish support to many so-called religious papers. Not a few of them would perish but for the aid they receive from medical quackery. Hence the importance of the movement in the Baltimore Conference to exclude these advertisements from the organs of the Methodist denomination. The editors and the quacks can make a strong argument for their union. The editors may go on arguing that they are enabled to propagate religion with the resources of quackery; and the quacks can show that the so-called religious press is the best field for their operations, the place where they can put their money so as to do the most good. Of the quacks who thus advertise, there are some whose medicines are injurious to the men, women, and children who use them; and we often see, in so-called religious papers, quack-medicine advertisements which are an outrage upon decency. If religion be a matter of truth, how can its organs sustain themselves by such falsehoods?'"

— The transactions of the Medical Society of the College of Physicians, published in *The Dublin Journal of Medical Science* for April, 1876, contain an account of a case of idiopathic glossitis, by Henry G. Croly, F. R. C. S. I. Mr. Croly gave an account of his experience of glossitis, a subject to which his attention had been given during the last twenty years. He referred to the pamphlet he had published on the disease, in which he had recorded the details of thirteen cases of acute inflammation of the tongue that had been under his observation in hospital practice, and given the treatment he had resorted to therein. He would now bring under the notice of the society the case of a horse-shoer, aged twenty-two, who was in his usual good health until the day previous to his consulting Mr. Croly, when he felt a soreness in his tongue. He had been exposed to great heat and chills. The left half of his tongue was swol-

len and exquisitely painful; tender and hard to the touch; saliva dribbled from his mouth, and his articulation was characteristic of the disease from which he was suffering. He had some dyspnœa and considerable dysphagia. The tonsils were, as is usual, quite unaffected. Mr. Croly commenced his treatment by purgatives; he then dried the tongue, and having placed milk and sugar on it, applied a leech, but the leech would not take. The tongue being still considerably swollen, he made a longitudinal incision into it with a sharp-pointed bistoury. The hæmorrhage was moderate, but there was a considerable flow of serous fluid, followed by immediate relief. In making an incision of this sort there was an important consideration to be attended to. When only half of the tongue was inflamed, it became turned round; and if while it was in that position an incision were made parallel to the raphe, there would be a danger of wounding some of the vessels. This could be avoided by turning the edge of the bistoury slightly outwards. On the other hand, when the whole tongue was inflamed, the incision should be made perfectly straight. *Transverse* incisions were made in cases reported by Dr. Graves and Dr. Neligan, a practice which would not be countenanced by any surgeon of the present day. It yielded rapidly to active treatment, including purgatives, and free incisions. It began, he believed, not at the tip, but at the base of the tongue, and spread forward; and pressure upon the tongue gave the most intense pain. In making the incision it was necessary to get the bistoury well back. He made it a rule always to puncture the sublingual spaces near the teeth. Mr. Croly said that though idiopathic glossitis was obviously not a very common disease, still it was not so rare as some persons supposed.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF DR. GEORGE H. GAY.]

Cases of Injury from Falls. — CASE I. March 27th, Daniel McD., a carpenter, thirty years of age, fell from a staging, striking upon the ground thirty feet below. One hour after the accident he was brought to the hospital. At that time he was unconscious and could not be aroused; his pupils were equally dilated, and responded but feebly to light; the left leg contracted under irritation, but the right did not. There was no external injury; the pulse was 72, and of feeble character.

March 30th. Power was regained over the right leg.

For nearly two weeks the patient continued in the same condition, complaining of nothing but headache. His pulse at times fell to 44 beats in the minute, and his temperature to 96.4° F.

April 13th. The pulse rose to 90 and the temperature to 99°; brief periods of apparent sanity were first noticed.

From that time steady improvement took place, and in May he went home, at his own desire. His mind then seemed somewhat impaired, and mental exertion brought on headache.

CASE II. April 22d, Pat H., a stout Irishman, thirty-one years old, fell,

feet first, from the top to the bottom of an empty bin in a grain elevator, a distance of sixty feet. These bins are about ten feet square at the top, and thirteen feet from the bottom the sides begin to incline towards the centre, forming a hopper, the hard pine floor of which is only about a foot square. On the floor of one of these bins the patient was picked up in an insensible condition. Two hours after the accident he was brought to the hospital. Great pain was complained of in the chest and left hip. The sixth, seventh, and eighth ribs on the left side were broken near their angles, and there was slight emphysema at the points of fracture; the left hip was bruised and the left foot was swollen and disfigured, the lower tarsal bones seeming to have been driven upward; there was no crepitus, and the shape of the foot could not be restored. This patient had severe pain for several days, but no cerebral symptoms manifested themselves and he steadily improved.

Case III. April 27th, Samuel U. fell from a staging, striking upon a rock ten feet below, which lacerated the scalp and denuded the bone in the right frontal region; he was stunned for the moment, but was able to walk home. He entered the hospital a week later with a denuded spot as large as a silver half-dollar above the right eye, and two of the lower left ribs were found to be broken. The bone became covered with granulations and did not exfoliate, and the patient rapidly recovered without any symptoms of brain disturbance.

Case IV. June 13th, Calvin L., a sailor, seventeen years old, fell a distance of one hundred feet from the topmast of a vessel, striking first the cross-trees and then the deck. An hour and a half after the accident he was brought to the hospital. The pulse was then imperceptible at the wrist; there was great restlessness, but the mental functions seemed unimpaired; a marked irregularity was noticed in the spine in the lower dorsal region, attended with complete paralysis of the inferior extremities. Death occurred within two hours after entrance.

An autopsy showed fracture of the spleen and ribs immediately over it, and a fracture of the body of the twelfth dorsal vertebra and its right transverse process; the body of the vertebra was very much comminuted, and its inferior portion had lacerated the spinal cord. There had been considerable hæmorrhage from the spleen; the left shoulder and left side of the head were considerably bruised.

Case V. June 16th, Geo. McV., eighteen months old, fell from a second-story window, his head striking upon a brick sidewalk fifteen feet below. An hour and a half after the accident he was brought to the hospital. The only injury detected was a large ecchymosis on the left side of the head, with a small abrasion over the occipito-mastoid suture; the pupils were normal and there was no paralysis. But little pain was complained of, and in a day or two the child appeared as bright as ever, and at the end of a week there only remained a fluctuating swelling above the left ear.

The first case was a full-grown man, whose completely ossified frame and contracted muscles transmitted a shock but little broken to the brain, producing concussion. The last case was a baby whose flaccid muscles and whose cartilages yielded to the blow, and the brain was saved. In the other cases the bones which were the objects of violence gave way, and the force was thus expended, which would otherwise have been transmitted to the brain.

J. E. Garland.

LETTER FROM FLORENCE.

MESSRS. EDITORS, — One marked difference between the human and brute creation is the strikingly greater tenacity of life possessed by the latter. The lower one arrives in the scale, the greater are the powers of resistance and reproduction; and this depends not only upon their organization as animals, but is also governed to a great extent by their habits and surroundings; there is greater vitality, greater power of endurance, in the wild than in the domesticated animal. This is even more strongly marked among the different members of the human race: the simple life and habits of the Hindoo free from strain or excitement, enable him to support surgical operations and accidents under which the American or European, with his artificial mode of existence, coupled with its wear and tear, would inevitably succumb. Certain conditions which in a primitive state of society are purely physiological become under the influence of modern civilization pathological, such, for instance, as pregnancy and parturition; among the lower orders, those living principally in the open air, without having contracted the habits and vices of large cities, pass through the periods of gestation and delivery not only without inconvenience or danger, but with a recovery so rapid as almost to defy belief. I was some years ago informed on indisputable authority, by one connected with a maternity hospital, that there was a class of women in and about Pisa who at certain seasons of the year passed a great part of their time in the woods, collecting acorns for their hogs and broken branches for winter fuel. These women, when in an advanced stage of pregnancy, about the period of their expected delivery, always sallied from home provided with tape and scissors. When the critical moment arrived, they performed on themselves the office of midwife, and returned to the domestic hearth with their offspring enveloped in their aprons. Even in England it is a common thing to see women at the washing tub who three or four days before have added to the population. What would the dainty lady of fashion, the victim of nervous whims and flurries, with her smelling-bottle by day and her chloral by night, say to this? These are facts so well known and admitted that it would almost appear superfluous recapitulating them, were it not that the case which they are intended to introduce is so extraordinary, in fact unique in the annals of surgery, that it far eclipses the performances of the Pisan matrons; without further prelude I will proceed with my history.

N. N., native of Corsica, aged sixty, general appearance showing great emaciation; color of a dirty yellow, suggestive of malignant disease; has generally been healthy; had never to his knowledge suffered from any serious abdominal affection; no history of cancer in the family; has been ill a twelvemonth, suffering from constipation and painful defæcation. Gradually he became conscious of some mechanical obstruction situate at the orifice of the rectum, and then of a protrusion, which sometimes he could himself replace, at other times was constrained to seek medical aid for its reposition. The constipation was temporarily relieved by purgatives, which produced discharges of scybala, blood, and mucus, followed by the appearance of a tumor after

considerable straining; occasionally there was also oozing of a sero-mucous fluid. The more general opinion among his medical advisers was that it was a tumor proceeding from the walls of the rectum, probably of a cancerous character. The pain attending defæcation had become so severe that he could with difficulty be persuaded to take nourishment. An operation was proposed, but objected to, and he determined to proceed to Florence for further advice.

On the first examination a tumor was discovered blocking up the rectum, which the patient could generally protrude, but which he failed to do on the present occasion. A dose of castor-oil was given, which effected this object; it was then discovered to be movable, showing that it was unconnected with the deeper structures of the rectum. The finger could pass freely round its circumference, where there was space for the escape of the fæces. The surface of the tumor was irregular, from the presence of vegetations, and no aperture of any kind was detected; it was considered to be a cancroid, and later a polypus. During a subsequent examination a portion was detached from the surface, and on submitting it to the microscope it was ascertained or rather held to be a papilloma, but the surgeon was unconvinced, and adhered to his first impression that it was a polypus. The general appearance of the patient was anæmic, from loss of blood, suffering, and defective nourishment. After sundry consultations an operation was proposed as the only chance of salvation, and agreed to by the sufferer. A full dose of castor oil was administered, which produced a copious discharge of fæcal matter and complete protrusion of the tumor. The patient was placed on an operating table. On applying a wire ligature, to prevent hæmorrhage, it was found that the point of origin of the polypus could not be reached, as the peduncle was evidently a long one. It was, however, applied as high up as practicable. The extreme ends of the metallic ligature were securely fixed to the handles of the instrument; the tumor was drawn down, and excised by the galvano-caustic wire at a short distance from the point of ligature. This apparently simple operation was followed by unusual results, namely, shock, with its concomitant symptoms. The patient was hurried to bed, and the surgeon was surprised to find that his wire ligatures had almost vanished, that the handle of the instrument alone prevented their disappearance into the cavity of the abdomen. The tumor was now examined, and it was soon discovered, to the general astonishment and consternation, that the tumor was *not* a cancroid, *not* a polypus, *not* a papilloma, but the whole of the ileo-cæcal valve, with a portion of the ileum, in a considerably hypertrophied state, measuring, in its invaginated, telescopic condition, ten centimetres. The wires were now inclosed in glass tubes, and the patient left in repose, with a prognosis which may easily be imagined. After fourteen hours evidences of strangulation manifested themselves, and it was determined to slacken the ligature, which was followed by a copious discharge of serous fluid, and a large quantity of fæcal matter, blood, and mucus. In a few hours there was a subsidence of all untoward symptoms. In a few days the bowels were opened naturally and regularly, which had not occurred for many months, and in a fortnight the patient announced and carried out his intention of returning to his native hills, where he now remains in perfect health.

It would be useless to speculate as to nature's mode of proceeding in the

readjustment of this intestinal hiatus, but such are the facts. A well-known lecturer on anatomy and physiology in London used to say that the only use he could see in the appendix vermiformis was to catch cherry-stones, and that we should be much better without it; but he little thought a man could get on so satisfactorily without his ileo-cæcal valve and appendages. The preparation may be seen at the pathological museum of the Florence hospital. On some future occasion I will send you a history of the expulsion of one metre and thirty centimetres of small intestine, following intussusception, and the patient does not seem to miss it.

WILLIAM WILSON, M. D.

33 VIA SANTO SPIRITO, FLORENCE, *May* 28, 1876.

DR. JOHN OSGOOD STONE died suddenly in New York on the 7th of June. Son of Robert Stone, he was born in Salem, Mass., in 1813, graduated at Harvard College with honors in 1833, receiving his medical diploma from the same institution in 1836. After spending the two subsequent years in the hospitals of Paris, he settled as practitioner of medicine in the city of New York in 1838, where his talents and force of character soon gained him the foremost position in his profession.

Dr. Stone was vice-president of the New York Academy of Medicine, surgeon to Bellevue Hospital for several years, and also served on the medical board of health for four years. His contributions to military surgery, written at an early period of his medical career, were received with much commendation, both at home and abroad. He had also at different periods of his life collected together valuable materials for scientific publications.

Ever earnest in his professional work and unsparing alike in devotion and in sympathy, his presence in the sick-room was always a blessing and comfort. From many stricken city homes, where Dr. Stone's name was ever a household word, come to his bereaved family grateful tributes to the memory of one who, with unswerving fidelity, ever followed in the footsteps of the Great Physician. S. S. K.

NORFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting of the society will be held at the Evans House, Boston, Tuesday, July 11th, at eleven o'clock. Papers, communications, etc.: Dr. D. B. Van Slyck, Management of the Obstetrical Forceps. Dr. R. T. Edes, Intracranial Syphilis. Dr. J. A. Gordon, Suppurative Inflammation of the Symphysis Pubis. Dr. G. K. Sabine, "Lister's Dressing." Dr. H. A. Martin, Tracheotomy without Tubes. Exhibition of pathological specimens. Dinner at two P. M.

A. H. NICHOLS, *Secretary.*

BOOKS AND PAMPHLETS RECEIVED. — On a New Meteorological Instrument. By J. N. Osborne, of Washington, D. C. (From the Proceedings of the American Association for the Advancement of Science, Detroit Meeting, August, 1875.)

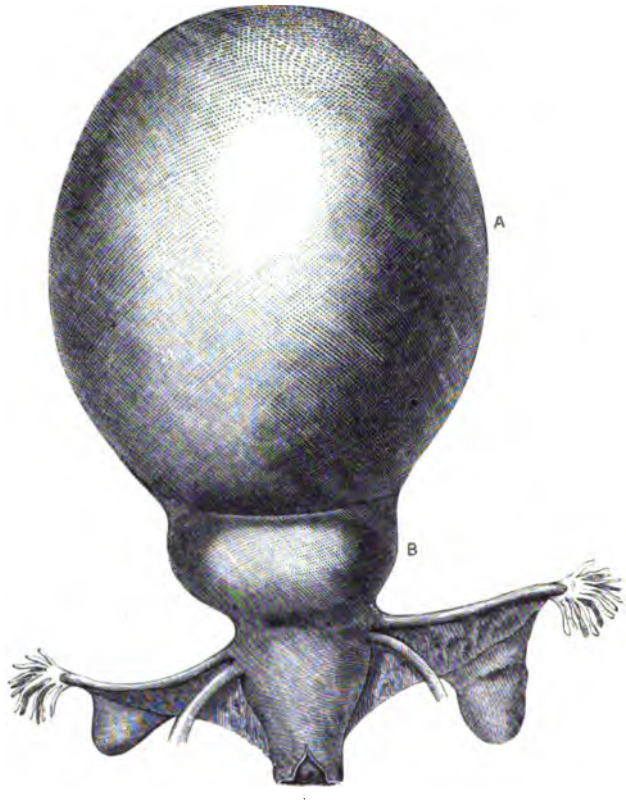
Lectures on Fever. By William Stokes, M. D. Edited by John William Moore, M. D. Philadelphia: Henry C. Lea. 1876.

Mémoirs sur la Galvano-Caustique Thermique. Par le Docteur A. Amussat, Fils. Paris: Libraire de Gerneer Baillière. 1876.

Des Sondes a demeure et du Conducteur en Baleine. Par le Docteur A. Amussat.

Bachelder's Popular Resorts and How to Reach Them. Illustrated. Tourists, Edition. Fourth Edition.

Cyclopædia of the Practice of Medicine. Edited by Dr. H. von Ziemssen. Vol. XI. Diseases of the Peripheral Cerebro-Spinal Nerves. New York: William Wood & Co. 1876.



FIBRO-CYSTIC GROWTH INVOLVING THE UTERUS.

A, Cyst.

B, Uterus.

There were small cysts in both ovaries.

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NOTES OF A SUCCESSFUL CASE OF EXTIRPATION OF THE UTERUS, WITH BOTH OVARIES, FOR FIBRO-CYSTIC DISEASE, BY GILMAN KIMBALL, M. D.[1]

REPORTED BY SILAS D. PRESBREY, M. D.

Mrs. W. J. B. was born in Taunton, June 6, 1839, of healthy parents, and, so far as hereditary taints are concerned, with healthy ancestors. During girlhood and womanhood she has enjoyed good health; commenced to menstruate at fourteen years of age, and menstruation has since been normal, except in instances hereinafter to be mentioned.

She was married January 9, 1868, and was delivered of a daughter after a natural labor, October 8, 1869; made a perfect recovery, and continued in good health till April, 1874, at which time she found a small bunch in the left inguinal region, apparently about the size of an English walnut. It gave her no inconvenience, except by the consciousness of its presence. She first consulted a physician regarding it in September, 1874, when the writer was called. Mrs. B. was at that time between thirty-five and thirty-six years of age, "a slender person, of 'fair' size, with sharp features, dark complexion, black eyes and hair," of peculiarly nervous, wiry temperament, which, as Dr. Bixby in his Successful Case of Ovariotomy says, "is a condition often seen to act most favorably in sustaining the vital forces, either against the effects of sudden shock induced by severe operations, or by the more prolonged effect of chronic affections." She did not consider herself ill, but was anxious to learn the nature of the "bunch" in the abdomen. A rounded tumor, apparently about five inches in diameter, was found in the left and lower portion of the abdomen, movable, falling toward either dependent side, but not so far to the right as to the left. By vaginal examination was found a normal vagina, the uterus inclined to prolapse, but not very movable, and anteverted at the inner os. The os uteri appeared patulous, and the arbor vitæ showed very plainly on the posterior part of the exposed canal. The length of the uterine cavity was not determined, as it was found very difficult to introduce the sound beyond the inner os. The diagnosis of ovarian tumor, with possibly fibrous enlargement of the uterus, was ventured. In the lat-

[1] From the Report of the Bristol North District of the Massachusetts Medical Society.

ter part of the same month patient consulted Dr. Sylvanus Clapp, of Pawtucket, and in May, 1875, sought advice of Dr. Gilman Kimball, of Lowell, both of whom diagnosticated ovarian tumor, and suggested operation. September 21, 1875, she entered the Massachusetts General Hospital, where she came under the care of Dr. C. B. Porter, of Boston, who also made the same diagnosis, and advised tapping as a palliative, telling her that probably the case would afterwards come to operation. September 22d paracentesis was done by Dr. Porter, and fifteen and a half quarts of pale, yellow, serous fluid were removed.

On Saturday, 25th, contrary to advice of her physician, she returned home, where she remained very comfortable for a short time, but in about five weeks seemed as large as before the operation. The uterus became very much prolapsed, so that a Meigs's ring was worn to prevent procidentia. Patient became nervous and exhausted, and very much emaciated. Again she sought advice of Dr. Kimball, who, as before, suggested operation, and January 5, 1876, was agreed upon as the day for its performance, that date being the middle of her menstrual month.

January 4, 1876. The patient was found about the house, making preparations for the morrow, in good spirits and anticipating a speedy relief from her burden. An ounce of castor-oil was ordered, to be taken in the afternoon.

January 5th, A. M. The bowels had been thoroughly unloaded, the rectum cleansed by an enema of warm water, and the bladder emptied. Everything was in readiness for the operation, and etherization was commenced at half past eleven o'clock. There were present Dr. Kimball, of Lowell, who performed the operation, Dr. Clapp, of Pawtucket, and Drs. Murphy and Presbrey, of Taunton. Patient came slowly under the ether, and the operation was begun with the ordinary incision in the median line below the umbilicus. The abdominal walls were very thin, with but little adipose material. There then appeared in view a fleshy-looking substance of the peculiar dark pinkish color characteristic of fibrous growth. The tumor was tapped, and a quantity of straw-colored fluid flowed freely through the canula. By this proceeding the bulk of the tumor was greatly reduced, but there still remained a considerable fullness in the lower part of the abdomen. The sac was found quite adherent to the peritoneal lining of the upper anterior portion of the abdomen. These adhesions were carefully torn away with the fingers, and the sac brought out through the incision. There was no adhesion at the point of former tapping. Upon drawing the mass up, the pelvis was found to be nearly filled by a fibrous growth which formed the lower portion of the sac, from one to three inches in thickness, and gradually fading upwards into the thin walls of the cyst. The fibrous growth was found to extend by prolongation to the uterus, and to be

thoroughly blended with that organ, making one continuous substance. Both ovaries had small cysts in their substance.

As a preliminary measure the broad ligament was perforated upon the left side, to the left of the ovary, and a silk ligature was passed around it and firmly tied. The tissues between the ligature and the tumor were then divided. A considerable hæmorrhage from the cut surface occurring, a temporary ligature was applied, to prevent the bleeding from the tumor. It now became possible to bring out the whole mass through the incision, and the wire écraseur was applied at a point corresponding to the external os, involving the remainder of the broad ligament and the round ligament of the left side, the upper part of the vagina, and the round and broad ligaments of the right side beyond the right ovary. The wire was tightly drawn and twisted for security, and the mass removed by the knife. The écraseur was allowed to remain, and the stump was transfixed just outside of the loop of the écraseur with a curved trocar, which was arranged to give additional security against the return of the stump into the abdominal cavity. The abraded surface of the peritoneum, where the adhesions had been torn away, was carefully wiped with a dry cotton cloth to make sure that there was no hæmorrhage and that no clots were left, the wound was closed with silk sutures, and the stump cauterized with the hot iron. Care was taken throughout the operation to keep the room at a high temperature (70° to 80°), and to hold the flaps of the incision close to the tumor, that the abdominal organs might be as little exposed to the air as possible. No dressing was applied except a folded compress of cotton cloth laid over the wound and upon the trocar and écraseur.

The operation was completed at half past twelve, and occupied just an hour. The pulse and respiration continued natural throughout. Soon the patient began to recover from the effects of the ether. One fourth of a grain of sulphate of morphia was administered by hypodermic injection, and she was left in the care of the nurse.

The mass which had been removed was examined, and found to consist of twenty pounds of straw-colored fluid and five pounds of solid material, the latter consisting of the cyst, the fibrous growth, both ovaries, parts of the suspensory ligaments of the uterus, and the uterus itself. The specimen was presented to Dr. J. B. S. Jackson, and is now preserved in the medical museum of Harvard University.

Four P. M. The patient recovered from the immediate effects of the ether, but was somewhat narcotized by the opiate; no pain; constant nausea and repeated vomitings. Ordered small pieces of ice, gentle support to the abdomen during vomiting, and an enema of twenty drops of tincture of opium in starch, in case of pain or restlessness. Pulse 72. Respiration normal.

Ten P. M. Condition much the same as above.

January 6th, second day. Pulse 80; little sleep; constant nausea and occasional vomiting; no pain. Catheter used twice, and one opiate enema administered. (Here I may say that both the catheter and the laudanum injection were used for the first five days by the nurse as occasion required, averaging for each perhaps once in eight hours.) Ice continued, and small quantities of iced milk and lime-water frequently given. P. M. Has had a comfortable day, except in the matter of nausea, which still persists. There was no hæmorrhage, nor did any occur during convalescence. Tongue rather dry and red; pulse 84. Treatment same as before.

January 7th, third day. Has had some sleep; nausea still present; abdomen flat, a little blood-stained serum oozing from stump. Pulse 90; expression fair; tongue dry. The skin of the abdomen was protected, where the "irons" bore upon it, by applying clean linen cloths, which were afterwards renewed every time the wound was dressed, or rather washed, for there was but very little dressing in the case. Treatment the same, except that the subnitrate of bismuth in two-grain doses was ordered. Patient removed on sheet to opposite side of bed.

January 8th, fourth day. Looking very much exhausted; expression sunken; tongue dry, with slight brown coat. Sleep poor and pulse 120; thermometer 101.5°; no chill; abdomen flat; nausea persistent. Ordered beef-juice and brandy in addition to ice, lime-water, and milk.

January 9th, fifth day. Passed a little better night; looked rather brighter; passed water without catheter; nausea diminished; no vomiting; pulse 116; tongue dry, with brownish coat; abdomen a little fuller, particularly upon left side over descending colon; incision healed; stump discharging sero-purulent matter. Ordered same treatment, with addition of milk gruel, by request of patient.

January 10th, sixth day. Sleep not so good; looks badly again; nausea and vomiting returned; abdomen much distended; meteorism; no chills; no pain, except discomfort from distention. She attributes the bad symptoms to the fact that the gruel was made of oat-meal, which, she says, generally disagrees with her. Wound same as day before; pulse 116; tongue more coated. Discontinued all nourishment except ice and milk with lime-water. Five grains of Schoeffer's pepsine given three times daily, and abdomen rubbed freely with oil of turpentine. Patient again removed to opposite side of bed.

January 11th, seventh day. Slept quite well; had two enemata of starch and laudanum; looking much brighter; pulse 108; tongue softer; fullness of abdomen much less; some gas passed by rectum; no vomiting; nausea diminishing. Desired more solid food. In addition, milk toast and chicken broth were ordered by her request. Pepsine and turpentine continued; stitches removed; stump becoming quite offensive; dressed with weak solution of carbolic acid.

January 12th, eighth day. Passed a very good night; two opiate enemata; pulse 102; tongue cleaning, mouth not so dry; abdomen soft; considerable discharge from stump; wants to chew beefsteak, which was allowed, with chicken broth, milk, soft toast, and blanc mange. Gelatine capsules of sulphate of quinia, one grain, ordered before meals three times daily, and pepsine *pro re natâ*.

January 13th, ninth day. Passed a comfortable night, and doing well; treatment continued, and roasted oysters added to diet list.

January 14th, tenth day. Looking well; cheerful; says she "feels like herself;" pulse 96; tongue and mouth much better. Treatment as before. Écraseur and trocar quite loose.

January 15th, eleventh day. Record same as above.

January 16th, twelfth day. In all respects improving. "Irons" removed; slough from stump not yet free. Ordered by injection a cupful of warm lard, to be followed after two hours by an enema of warm water and molasses.

January 17th, thirteenth day. Not quite so comfortable; injection resulted in two full dejections; no nausea; abdomen quite flat. Treatment as before.

January 18th, fourteenth day. More comfortable; appetite increasing. Beefsteak and bread allowed. Opiate enema used only at night, to insure rest.

January 19th, fifteenth day. Slough from stump found free and removed, leaving a small opening with granulating edges, and slight purulent discharge. Adhesive strap applied.

January 20th, sixteenth day. Condition good; slept well without opiate injection.

January 22d, eighteenth day. Very comfortable; removed from bed and reclining in "sick-chair."

January 25th, twenty-first day. Passed a rather restless night; some pain in bowels; no dejection since the 17th; abdomen fuller. Ordered limited diet and one half ounce of castor-oil.

January 26th, twenty-second day. Much better; bowels relieved; abdomen flat.

January 29th, twenty-fifth day. Convalescing rapidly. Opening in abdominal walls nearly filled with granulations.

February 1st, twenty-eighth day. Improving; is able to bear weight on feet; has one natural dejection daily, and good sleep and appetite.

February 7th, thirty-fourth day. Improving; has walked a few steps; opening full, and commencing to glaze over.

February 10th, thirty-seventh day. A sharp attack of colic, with distention of bowels and great meteorism. Relieved by an alkaline cathartic and aromatics, with turpentine externally. Wound nearly well.

March 1st. Is once more about the house, and considers herself entirely well.

A CASE OF POST-DIPHTHERITIC PARALYSIS.

BY A. F. REED, M. D. HARV.

In October, 1875, being twenty-six years of age and in good health, after two months' constant exposure to diphtheria, I was inoculated from a child two years old, who, on examination, coughed portions of the membrane into my face. Six days after this exposure I was seized with a chill, followed the next day (October 28th) by the appearance of a diphtheritic deposit on one tonsil. The deposit was limited to the tonsils and back part of the pharynx, and in nine days disappeared. Exhaustion and great gastric irritability retarded convalescence. Four weeks passed before I was able to sit up. Two weeks after convalescence was declared, a sharp, lancinating pain in the left axilla was noticed, recurring two or three times at short intervals. In a few days, after seeing visitors or talking a little, severe and constant pain in the elbow-joints occurred, which soon extended to the muscles of the arm and chest. After resting these pains diminished or disappeared, and in a week entirely ceased. On attempting to rise, my limbs seemed surprisingly weak, but at the expiration of the sixth week a short walk was possible. After a brief period of improvement my legs began to grow uncertain and weak, and by December 10th I could take but a few steps. At this time a partial loss of sensation came on, beginning in the feet and gradually progressing to the trunk, together with a feeling of coldness in the feet, which, however, were not cold to the touch. This numbness increased faster than the loss of motion. Soon after its appearance in the lower extremities the ends of the fingers lost their sense of touch, the loss of power also extending in a week to the elbows, and at no time greatly affecting the arm. Loss of motion in the fingers and fore-arm accompanied it and increased for some weeks. The mouth, tongue, and portions of the face lost their sensitiveness at the same time and to the same degree. In a few days my voice grew thick, and was soon like that caused by cleft palate. The soft palate and uvula hung loosely in the mouth, and on attempting to swallow fluids they were regurgitated through the nares. Dimness of vision for a short time prevented reading. In three weeks my voice, then at times unintelligible, grew suddenly better, and in four or five days was restored. The difficulty in swallowing also soon disappeared. The loss of motion and sensation in both arms and legs increased. In walking I seemed to be on velvet; there was a sensation of coldness in my feet, and at first the circulation was retarded. The general loss of power was progressive until February 1st. It was then impossible for me to stand alone even when lifted up, to raise myself an inch from the chair by my arm, to bring my thumb and fore-finger together, or to exercise any strength in any part. The toes

hung lifeless, and no reflex action was produced on tickling the sole of the foot. The urine was voided with difficulty, and the power of erection was gone. The inter-osseous muscles were wholly paralyzed, though still reacting to the faradic current. The fingers were drawn up when the hand was at rest, but only by great effort could be straightened out again. The muscles of the arm were much weakened, but with those of the thigh retained more power than the rest. They were also the last to lose and the first to gain motion. All these muscles were more or less responsive to the faradic current, the gastrocnemius least of all. During the weeks previous and at this date my appetite was excellent, and my food well digested. From this time an improvement as general as the invasion was noticed. In one week I could lift my body in the chair an inch or two, and when standing felt more secure. In two weeks I could raise myself up from the chair mainly by my arms, and undressed without aid. At the end of three weeks I could walk about the room aided by a cane, and wrote legibly. The difficulty in voiding the urine and loss of power of erection had by this time gone. In four weeks I walked out for a short distance, and in two weeks more all paralysis had disappeared, leaving some neuralgic pains in the knees and feet, which lasted but a short time. On April 1st I walked several miles without great fatigue. Atmospheric changes made no change in my strength. Insomnia was the greatest annoyance suffered while confined to the house. Three or four hours' sleep was all that could be obtained. The loss of sleep did not, however, leave me unrefreshed.

Treatment. — From January 12th faradism to the muscles every day until February 15th, afterwards three times a week for three weeks. Tincture of nux vomica and tincture of phosphoric ether were given for ten days. The stomach rejecting these, one thirtieth of a grain of strychnine was substituted, which was increased to one fifteenth three times daily for six weeks. A pint of ale daily for two months. Friction and kneading of muscles every morning for one hour.

RECENT PROGRESS IN MEDICAL CHEMISTRY.[1]

BY E. S. WOOD, M. D.

TOXICOLOGY (*concluded*).

Phosphorus. — Hilger[2] reports a case of phosphorus poisoning in which all of the biliary constituents were present in the urine in so large an amount that the biliary acids could be obtained in the crystalline form from only five hundred cubic centimetres. The urine was precipi-

[1] Concluded from page 11.

[2] Fresenius's Zeitschrift, 1876, page 105, from Archiv für Pharmacie, 207, page 385.

tated directly with basic acetate of lead and ammonia, the precipitate collected, dried, and extracted three or four times with absolute alcohol. This alcoholic extract was treated with a little carbonate of sodium, evaporated to dryness, and again extracted with warm alcohol. From this solution all of the tests for the biliary acids were obtained, and the crystals precipitated from it by the addition of ether.

Large amounts of bilirubin and biliverdin were also obtained from this urine by adding to fifty or one hundred cubic centimetres, after warming gently, a saturated solution of baric hydrate until it had an alkaline reaction. The precipitate formed, after filtering and washing, gave the color test with nitric acid directly. Usually, however, in separating the bile pigments from urine in this way, it is better to boil this precipitate with a solution of carbonate of sodium, which dissolves the pigments with a brownish or greenish color, filter, evaporate the filtrate to dryness, and test the residue, or else precipitate the pigment from the sodium carbonate solution by a dilute acid, filter, and test this precipitate.

In another case, reported by von Mering,[1] the urine was examined three or four days after the ingestion of the phosphorus. Twelve hundred cubic centimetres of urine were passed in twenty-four hours; the amount of urea was 20.5 grammes and of uric acid 1.34 grammes. There was no lactic acid, leucin, tyrosin, or albuminoid substance resembling peptone, which has been observed in many other cases. No grape sugar was detected, although two hundred grammes of sugar were taken daily, and no grape sugar was detected in the alcoholic extract from the liver after death. No biliary pigments were present in this specimen of urine. In another case the urine did contain lactic acid and but little urea.

Dr. F. Fischer has experimented with guinea-pigs[2] in order to determine the length of time which must elapse before free phosphorus entirely disappears from the body. For this purpose four guinea-pigs were poisoned with twenty-three milligrammes of phosphorus each, and buried. In four weeks one was exhumed and analyzed for phosphorus by Mitscherlich's method. Five milligrammes were recovered, which showed that seven to ten milligrammes of free phosphorus were originally present in the retort. In eight weeks another was exhumed, and three milligrammes of phosphorus were recovered. In twelve weeks a third was examined, but no free phosphorus could be detected. Phosphorous acid, however, was present, as was shown by the formation of phosphoretted hydrogen on treating the tissues with zinc and sulphuric acid. From this gas phosphide of silver was obtained, and on being ignited

[1] Centralblatt für die medicinischen Wissenschaften, 1876, No. 9, from Deutsche Zeitschrift für praktische Medicin, 1875, No. 45.

[2] Vierteljahrsschrift für gerichtliche Medicin, 1876, page 1.

it burned with the characteristic green flame. Hence, although no free phosphorus was found, the fact that poisoning by phosphorus had taken place was established with a great degree of probability. The fourth guinea-pig was examined at the end of fifteen weeks, but neither free phosphorus nor phosphorous acid could be detected.

These experiments are valuable as showing that one half a grain of phosphorus resists oxidation for so long a time, although they by no means fix definitely the limit of time for the disappearance of this metalloid from the human body.

J. Ashburton Thompson[1] has proved the absolute harmlessness of red phosphorus, which is entirely free from ordinary phosphorus. A dose of 1.8 grammes was taken daily for forty days in one case, and in another 1.8 grammes were taken daily for thirty days without producing any physiological action.

Digitalis. — An excellent case of digitalis poisoning is reported by Dr. C. Köhnhorn.[2] A young man took during five weeks one hundred and thirty-seven pills, each of which contained 0.1 gramme of powdered digitalis leaves, for the purpose of rendering himself temporarily unfit for military duty. Four pills were taken morning and night for five weeks, when death suddenly occurred. The amount of digitalis ingested daily was, therefore, 0.8 grammes (= about twelve grains). He was admitted to the hospital fourteen days after he began to take the pills, complaining of pain in the stomach, loss of appetite, headache, and ringing in the ears. His appearance was very bad, and odor of breath offensive. The temperature was normal, but pulse only fifty-six per minute. In three days after his admission the pulse fell to fifty-two. In eight days vomiting of greenish slimy material took place. His strength diminished gradually, he complained of great dimness of vision, the skin was ashy and parchment-like, and anæmia was marked. Death took place suddenly twenty-one days after his admission to the hospital. The pills were not found until after death.

The autopsy showed a healthy condition of all the organs except a slight catarrh of the stomach and intestine. The blood was dark and fluid. Chemical analysis detected digitalin in the contents of the stomach, contents of the duodenum, and in some of the pills. The digitalin was detected by both chemical and physiological tests.

This case is an extremely interesting one as occurring in a person previously in perfect health, and on account of the accuracy with which the symptoms and post-mortem appearances were observed and recorded.

Morphia. — Husemann[3] recommends a new test for morphia, which

[1] Pharmaceutical Journal, 1875.

[2] Vierteljahrsschrift für gerichtliche Medicin, April, 1876, page 272.

[3] Fresenius's Zeitschrift, 1876, page 103.

because the plate makes them look like pigment cells that we say it is bad. Plate I. represents a horizontal section through the skin, cutting the hair bulbs transversely; let us quote from the description and then tell what we see: "The circular patches, showing a dark margin and opaque centre, represent the hairs cut transversely. The hair, being of a dark, non-actinic color in the specimen, prevented any light from passing through, and thus produced the black spots in the print. These hairs are surrounded by several layers of epithelial cells, which are indicated by the lighter halo around the dark centre. The margin is again dark, being more deeply stained by carmine in the specimen, and consists of connective tissue fibres." What we see looks to us like a number of targets with rather irregular black bull's-eyes surrounded by a grayish layer presenting more or less of a dotted appearance, which is in turn surrounded by a black stripe. We can no more tell of what these parts are composed than we could whether a target half a mile off was painted on wood or on iron. We fear that the practitioner who endeavors to acquire microscopical knowledge from these plates will come to the conclusion that everything looks pretty much alike under the microscope, just as all cats are of the same color in the dark. To sum up, we must say that we doubt if much can be done in teaching microscopy by plates, and that we think photography is particularly unsuitable. We are sorry to criticise so severely a work that must have entailed great labor and expense, but it is due to such of our readers as look to us for guidance in such matters to give our honest opinion, which is that in conception the work is a mistake and in execution a failure.

T. D.

TRANSACTIONS OF THE PATHOLOGICAL SOCIETY OF LONDON.[1]

ATTENTION should have been earlier called to the appearance of this volume, which, like its predecessors, contains a large amount of valuable material destined to find its way, sooner or later, into the various medical works published in Great Britain and elsewhere.

There is one objectionable feature met with at the very outset, and occasionally arising throughout the entire book. This is the apparent hesitation of some of the exhibitors to call things by their proper names. A tumor of the arm, for instance, is spoken of as a neuroma, yet the description of the specimen indicates something quite different from the ordinary tumors of this character. A surgeon may be excused for speaking of a growth proceeding from a nerve-trunk as a neuroma, yet when he receives the detailed report, illustrated by drawings, from the pathologist to whom he has sent his specimen for examination, it seems as if the more exact classification of the latter might be adopted. Again, tumors of the scapula, of the zygomatic fossa, are entered as such in the table of contents and in the index. This, too, notwithstanding the fact that the committees to whom the specimens were referred for examination were enabled to classify them very readily.

Dr. Fagge reports a case of diffused suppurative inflammation of the stom-

[1] *Transactions of the Pathological Society of London.* Vol. xxvi. 1875.

ach, which suggests one of those rare forms of diffused cellulitis in the walls of this organ, bearing a close resemblance to the phlegmonous erysipelas of the surface of the body. It is unfortunate that the post-mortem changes should have become so advanced as to have obliterated much evidence without which the case, as reported, must be regarded as incomplete.

At the close of the volume nearly a hundred pages are given up to a discussion concerning the germ theory of disease. We are not aware that any essential contribution to the knowledge of the subject was made, though some of the gentlemen showed themselves to be skilled debaters. R. H. F.

ATLAS OF SKIN DISEASES.[1]

THE author has in press a general treatise on skin diseases, and offers this atlas as a series of illustrations to accompany its text. It will contain representations of all the affections which the general practitioner is likely to meet with, and of all their more common varieties. By these means he hopes to supply his readers out of the great cities with that practical acquaintance with the appearances of these diseases which the text-book cannot furnish, and which can be obtained otherwise only at special dispensaries and hospitals. Each portrait with its accompanying text will be complete in itself, and the work when complete may be bound in conformity with the arrangement of the text-book. The plates will be issued four at a time, quarterly, in royal quarto size, and the parts will not exceed ten in number. The first part, which is just issued, is a credit both to the author and to the artist, Mr. Hermann Faber, known in connection with the publications of the surgeon-general's office. The chromo-lithography, by Mr. Moras, is also well executed. The only fault that can possibly be found with their work is in respect to the coloring of some of the red tints of the diseased skin. The affections represented in the first number are eczema erythematosum, psoriasis, lupus erythematosus, and syphiloderma (pustulosum). The text which accompanies each is an admirably clear description of the case and of the disease in brief, and contains a short account of the treatment.

REPORT FOR WORCESTER DISTRICT.[2]

BY ALBERT WOOD, M. D., REPORTER.

THE committee, in presenting this report, regret that they have not been able to obtain that assistance from the members of the society throughout the district which would give them ample material from which to prepare a valuable report.

They would respectfully suggest that the committee of the state society, early

[1] *Atlas of Skin Diseases.* By LOUIS A. DUHRING, M. D., Professor of Skin Diseases in the Hospital of the University of Pennsylvania; Physician to the Dispensary for Skin Diseases, etc. Philadelphia: J. B. Lippincott & Co. 1876.

[2] Read before the Massachusetts Medical Society, June 13, 1876.

in the season, instruct the reporters of the several district societies as to what is expected of them in preparing these reports.

Many of the professional brethren in this district are men of great experience and wisdom, but either from want of time or from some other reason they seem unwilling to put their thoughts on paper. In another year, as the members come to realize more fully that these reports are solicited for the common good, it is to be hoped that more interest will be manifested, and that many will be willing to contribute their share to the common stock of knowledge.

The reports which have been received on the sanitary condition of the towns in the district have been so few that we shall attempt to give but the shortest report on this subject. It is well known, however, that scarlet fever has prevailed in many of the towns to an unusual extent, and with more than ordinary severity. It has been generally understood, outside of the profession, that there has been quite a severe epidemic of diphtheria, especially in Worcester. All have seen an unusual number of cases of throat disease, with or without exudation, in which the constitutional symptoms have been severe. These, by a certain class of physicians, have been called diphtheria. The cases have recovered, however, in a few days, under almost any kind of treatment, and have not, by the majority of physicians, been considered diphtheria. From a careful inquiry of many of the leading men of the profession we find that but few cases of true diphtheria have been seen. Many of the fatal cases of scarlet fever were accompanied with a diphtheritic exudation, which was the immediate cause of death in some instances. We expected to be able to present a report on this subject by one of our leading physicians, who has seen the largest number of cases, but we have failed to obtain it. During the past year more especially there has been noticed an unusual form of disease, which was undoubtedly epidemic and of the nature of influenza. It seemed to expend itself on the digestive organs, or, as it has been expressed by one of our most prominent physicians, who was himself a sufferer from the disease, all of the organs below the diaphragm were affected. To what extent it has prevailed we are unable to state, for unquestionably its true nature has not always been fully understood. It resembled in many respects typhoid fever, and was so considered by some. The history and course of the disease, however, show that it was not of this nature.

We regret that our endeavors to obtain a full report of the cases have not been successful. We have collected all of the cases we could in which salicylic acid has been used. These we present without any comment. The other cases which are reported we have considered of sufficient interest to be submitted.

Dr. Henry Clarke reports three cases of polyarthritis treated by salicylic acid:

Case I. J. M., a stout, full-blooded Irishman, was seized on the 27th of March with a chill, and on the following night with pain in the right knee and ankle. I saw him on the morning of the 28th. He had pain and tenderness of the right knee-joint and ankle. Tongue coated. Temperature 102°. Pulse 96. Ordered ten grains of calomel, followed by castor-oil and effervescing draughts of soda and lemon-juice.

March 29th, P. M. Pulse 104. Temperature 103°. Right knee and ankle swollen, red, and painful. Right elbow and left knee painful and stiff. Sweating profusely. Ordered salicylic acid in ten-grain powders, one to be taken every hour for twelve hours, and then one every two hours. Intended to see the patient the following day, but did not until the morning of the 31st. I found that he had taken the powders as prescribed, and had only one left, having taken, in about thirty-six hours, two hundred and thirty grains of the acid. He stated that he was free from pain after eight or ten doses, when he began to have noise in the ears, deafness, and confused feeling in the head. His wife said that at times he seemed to be "out of his head."

I found him considerably deaf and bathed in perspiration. Pulse 64. Temperature 97½° under the tongue. Joints free from tenderness upon pressure or motion. I ordered the acid to be discontinued for twelve hours, and then given in ten-grain doses once in four hours. This course was pursued for two days, and the patient was put upon quinine, two grains three times a day. There was no return of rheumatism, and in a week from the time he commenced to take salicylic acid he was dressed and about the house.

CASE II. Miss P., aged twenty-three, a healthy American girl. Taken with scarlatina on the 4th of May, 1876. Had a copious eruption and some ulceration of fauces. Everything went on well until the ninth day, May 13th, when she began to complain of headache, pain in limbs and back.

On the morning of the 14th I found her with polyarthritis well developed. Temperature 102°. Pulse 98. Several joints of upper and lower extremities swollen, red, and painful. I prescribed ten grains of salicylic acid every two hours.

On the morning of the 15th I found her with a pulse of 76. Temperature 97½° under the tongue. Skin bathed in perspiration. Joints free from pain and tenderness on motion. She had had much noise in ears, confusion in head, and mental excitement. The powders were not given so frequently as ordered after the sixth dose. Had taken only eight in the twenty-four hours.

I directed the remaining four powders to be given at intervals of six hours. There was no return of rheumatism, and the patient made a rapid recovery. She was dressed and sat up on the 17th.

CASE III. N. R., male, aged sixty-two. Date of first visit May 30th. Was informed by patient that he was taken with pain in limbs on the 25th of May; that he had been under the care of another physician, whom he had dismissed. I found him with both knees and ankles swollen, and discolored by tincture of iodine, which had been applied freely. Tongue coated. Temperature 101°. Pulse 98. He complained of pain in joints, especially in hip-joints. I prescribed ten grains of salicylic acid in wafers every two hours.

May 31st. Pain entirely gone. Moves the limbs freely, but complains of some stiffness in back and hips. Pulse 70. Temperature 97° under the tongue. Perspiration profuse. Noise in ears and dizziness.

Continued the acid in ten-grain doses once in four hours for two days longer.

June 2d. No rheumatism. Tongue still coated. No appetite. Ordered two grains of quinine three times daily.

June 4th. Found patient sitting up and dressed. Tongue cleaning and appetite improving.

Dr. Remington, assistant physician at the Worcester Lunatic Hospital, reports three cases of acute articular rheumatism: —

Case I. John N., boot-maker, aged forty. In 1865 he had an attack of acute articular rheumatism, which rendered him incapable of working for a period of three months. He has since been free from it up to the 2d of March last in the evening, when he complained of pain in his ankles and knees. On examination they were found to be swollen, hot, and painful. A cooling lotion was applied to the inflamed joints, and ten grains of Dover's powder prescribed.

March 3d. In the morning found the patient worse. Had not slept much. Joints swollen more, and very sensitive to touch. Temperature 102.3°. Pulse 100. Complained of headache and want of appetite. Urine scanty and high-colored. Ordered salicylic acid, five grains every hour through the day. In the evening found the patient somewhat better, although the joints were quite as sensitive to touch. Temperature 100.6°. Pulse 90. Ordered chloral hydrate, twenty grains for the night.

March 4th, morning. Patient feeling better. Temperature 99°. Pulse 85. Has passed considerable urine during the night; color a little darker than normal. Ate his breakfast with fair appetite. Joints not so painful. Continued the acid, five grains every hour. He complained of a sensation of burning in the stomach after taking the acid powders, but thought they made him feel better. The acid was given in water.

March 5th, morning. Patient up and dressed. Joints tender on pressure, but not very painful. Is able to move about the ward. Appetite good. Temperature and pulse normal.

March 6th. Patient as well as usual. Moves about the ward. Eats well, and says he has no pain.

March 14th. Found the man in bed. Ankles and knees very painful, red, and swollen. Said he took cold at an open window the night before. Gave salicylic acid, seven grains every hour through the day. Chloral hydrate, twenty grains at night. Temperature 100.2°.

March 15th. Patient much better. Can move his joints without much pain. Temperature normal. Continued the acid, five grains every two hours.

March 16th. Patient up and dressed. His ankles and knees nearly well. Continued the acid as on the day before. Temperature 98°.

March 17th. Patient as well as usual. Discontinued the acid. He has since had no recurrence of the disease.

Case II. Hospital attendant, aged twenty-two.

May 21st. In the morning when he awoke his right ankle was somewhat painful, felt hot, and was swollen. He did his morning's work about the ward, but the ankle grew rapidly worse, and at noon he went to bed and sent for the doctor. Found him with a temperature of 102°. Pulse 98. Perspiring freely. Ankle swollen, skin hot, red, and very tense. Ankle exquisitely painful. Had no history of rheumatism. Never had such an attack before. Or-

dered salicylic acid, ten grains every hour through the day. At nine o'clock in the evening, had taken eight of the powders. Was feeling much better. Had had headache during the day, and had been sick at the stomach, but was now feeling very comfortable. Said he had a queer sound in his ears, but it did not trouble him. Temperature 98.6°. Pulse 80. Ankle improving; could move it without much pain. Swelling had markedly subsided. Gave Dover's powder, ten grains, and directed him to take one of the acid powders if he should wake up during the night.

May 22d. In the morning found him doing his work about the ward. Had taken two of the powders during the night. There was no swelling of the ankle, which was not painful, but felt a little weak.

Saw him in the evening. He had taken two of the powders during the day. He said his ankle was well, and felt as comfortable as it ever did.

This patient, an intelligent young man, seemed to experience immediate relief from the use of the acid. He said that fifteen or twenty minutes after taking the medicine there was a sensible diminution of the pain in the ankle, and that it made him feel more comfortable, as he expressed it, "all over." He noticed this effect each time that he took the acid, and was confident that he owed his rapid recovery to the use of the remedy.

Case III. Miss G., attendant. Has been subject to attacks of acute rheumatism, which usually last one or two weeks.

April 15th. She was suffering from an attack, and applied to the house-physician for relief. Eight grains of salicylic acid were ordered, to be taken in water every two hours. Dover's powder, ten grains, at night. She was sick four days. She did not suffer so much as in former attacks, and her recovery was more rapid. She seemed to think that it was the acid that helped her, and said that she never took any medicine that appeared to do her so much good.

The acid has been used in two cases of facial erysipelas, but with no marked effect. In a case of lacerated wound of the hand the acid was used externally in solution and in powder, with most gratifying results.

Dr. Albert Wood, of Worcester, reports a case of rheumatism following mild scarlet fever, in which salicylic acid was used: —

M. B., female, aged eleven years, had mild but well-marked scarlet fever. On the fifth day of the disease, the eruption having nearly disappeared, she complained of a very slight pain in the right wrist. Temperature 99.2°. Pulse 84. Throat symptoms much improved. Her general condition was so good that I did not think much of the pain in her wrist, as she was a very nervous and sensitive child.

I did not see her until about noon, two days afterwards. I found her with both hands and wrists very much swollen, red, and exceedingly painful; also left shoulder, with pains through left chest. The muscles of right side of neck were stiff. Both ankles were also swollen and red, and she complained of pain about both hips.

I learned that these symptoms had come on during the night. Pulse 132. Temperature 103.5.° Very restless. No appetite. Tongue red and moist, with

papillæ raised. I ordered the affected joints to be wrapped in wool-wadding, also a layer to be applied around the chest. Gave six grains of salicylic acid every two hours in sweetened water. She complained most bitterly of the pungency of the acid on her sensitive tongue and throat. Afterwards the acid was given in Maw's wafers. The next day, twenty-four hours afterwards, all the swelling and redness had disappeared from the affected joints, excepting the left hand, where it was slight. Acid continued another day, when all symptoms of the disease were gone. Pulse 90. Temperature 99°. Medicine gradually diminished. No relapse.

Dr. F. W. Brigham, of Shrewsbury, reports five cases of rheumatism treated with salicylic acid, as follows: —

Case I. Young woman. Second week of rheumatic fever. Severe. Ten grains of acid every two hours gave perfect relief in twenty-four hours. Convalescence seemed established almost immediately. A week after, imprudent exposure induced relapse. The acid, continued forty-eight hours, utterly failed to relieve, and we returned to old remedies.

Case II. Middle-aged man, with chronic rheumatism. Having a more severe attack than usual, with some fever, gave acid a fair trial. No benefit.

Case III. Middle-aged man. Mild attack of acute rheumatism. Moderate fever. Considerably relieved in twenty-four hours by acid. Made quick recovery.

Case IV. Young man. First week of rheumatic fever, mild. Began to improve immediately under acid. Convalescent, discharged from care in four days. A few days after, rode out, "took cold," and suffered relapse. Again improved under acid, but less rapidly than at first.

Case V. Old man, with chronic rheumatism. At times feverish from pain. Gave acid fair trial. No benefit.

Dr. Brigham remarks that the first effect on the first case was charming, enough so to make him continue the trials, even if so excellent result be but infrequent. He has always given the powder in baked or raw apple, a perfectly satisfactory way.

(To be concluded.)

MAINE MEDICAL ASSOCIATION.

The twenty-fourth annual session of the Maine Medical Association was held in the city building in Portland on the 27th, 28th, and 29th ultimo. The president, Dr. J. M. Bates, of Yarmouth, occupied the chair.

The treasurer, Dr. T. A. Foster, of Portland, read his twelfth annual report, which, after being audited, was accepted and ordered on file. The receipts for the year, including assessments, the proceeds of the sale of Transactions, and interest, amounted to $465.66; the expenditures had been $595.32; and a balance remained of $162.83.

Delegates from Massachusetts, Rhode Island, and New Hampshire were cordially welcomed by the president, and were invited to take part in the discussions of the association.

The secretary, Dr. C. O. Hunt, of Portland, presented several papers of a business character, which were referred to committees. One of the papers was from the Society of Civil Engineers of Boston, requesting the coöperation of the association in introducing the decimal system of weights and measures into general use.

Dr. Wedgewood, of Lewiston, presented the report of the committee on the Maine Medical School, which was accepted and referred to the committee on publication.

During the session, interesting papers were read as follows: by Dr. T. A. Foster on Exercise as a Therapeutic Agent; Dr. Spaulding on Jaborandi; Dr. Haskell on the Hygiene of our Houses; Dr. Jewett on the Use of Belladonna in Inflammation of the Brain, on the Connection between Disease of the Heart and Uterus, and on Curability of Cancer of the Uterus; Dr. Weeks on Strangulated Hernia; Dr. Spaulding on Defective Light in our Public Schools; Dr. Albee on the Vis Medicatrix Naturæ; Dr. Greene on Ovariotomy, on Skin Transplantation, and on the Treatment of Cicatrices from Burns.

In the afternoon of the first day, the president delivered his annual address, which, after some discussion of the topics treated, was referred to the publishing committee. The committee on the president's address, at a later stage of the session, made the following report: —

1. That the committee having in charge the establishment of a state board of health be continued.

2. That while we would urge individual members to assist the hospital [Maine General] in every way in their power, we deem it expedient for the association for this year to support a free bed, with funds taken from the treasury of the association.

3. That in the matter of a preliminary education of students a strict construction and a more rigid enforcement of the rule adopted by the faculty of the Medical School of Maine and announced at the last session of this association, be adhered to, and that to encourage the faculty in this course the following resolution be adopted: —

Resolved, That any physician or school of instruction in receiving as a student a person who is deficient in the elements of an English education is guilty of an act of injustice to the student, of degradation to the profession, and of inhumanity to the community.

Dr. Sanger, of Bangor, introduced a series of resolutions embodying the principles adopted by the American Medical Association and by the Michigan State Association in relation to the University of Michigan, which were unanimously passed.

Professor Jenckes, of Detroit, Michigan, was proposed for honorary membership and was duly elected.

The annual election of officers resulted in the following choice: President, Dr. E. F. Sanger, Bangor; first Vice-President, Dr. W. A. Albee, Union; second Vice-President, Dr. A. S. Horr, Lewiston; Corresponding Secretary, Dr. S. H. Weeks, Portland; Recording Secretary, Dr. C. O. Hunt, Portland; Board of Censors, E. H. Hill, Lewiston; A. S. Thayer, Portland; D. L. Lamson, Fryeburg; F. C. Thayer, Waterville; A. J. Billings, Freedom.

Several reports were made by members, on subjects which had been assigned to them, and communications and cases were offered by sundry members.

The evening of the second day was occupied by a carefully written and very excellent oration by Dr. L. W. Pendleton, of Belfast. The subject of his address was involuntary action. First alluding to obvious examples of this in the physical system, then describing how those acts which we call voluntary evade the consciousness, he passed to the consideration of a twofold form of mental activity. Excellent authorities and abundant facts were given in support of the belief that the mind acts unconsciously as well as involuntarily; that the consciousness does not hold at once within its grasp all the activities of the mind, though it may reach them all singly. Instances were given of the mind undergoing important modifications without being itself conscious of the process. The pranks which our wits play with us when the memory dresses up in the guise of the imagination to deceive the consciousness, were spoken of as a real annoyance to authors, giving rise to serious charges of plagiarism. The phenomena of dreams were then introduced, with reference to many of their causes and benefits; their prophetic nature, their habitually apparent reality, their bearing upon the argument of a spiritual communication being possible, etc., were explained. Somnambulism, mesmerism, ecstasy, stigmatism, planchette, divinity, etc., were referred to as having a common origin, — the complete submission of the will and the absolute sway of a dominant idea. The history of witchcraft, epidemic delusions, religious ecstasy, etc., were accounted for by the will losing control through passion or emotion. Another field of involuntary action was then taken up, in which we are more instructed as we are more responsible, namely, those acts which are at first conscious and intentionally performed, but which by habit become unconscious.

The speaker claimed that the body may be trained under the will to so high a degree of automatic skill that it may be safely left to its own action, while the mind is free to employ itself in independent activities. The lower faculties of the mind, too, are capable of such a degree of education that they may go of themselves, while the will force, the most expensive of all force, is saved for or spent in mastering new difficulties. This was abundantly illustrated. The influence of habit on self-possession, promptness of thought, and decision of character was then shown. The undue development of habit in absent-minded persons, with its mistakes and inconveniences, was thought to occur to some degree in us all; "our tricks and our manners," though now involuntary, record the character of our past volitions. Habit as affecting our daily lives, our success in daily labor, was illustrated. The necessity of keeping all the actions under immediate control of the will, as urged by some authors, was not favored or thought possible. If it were possible, the effect would be to keep one in a state of perpetual babyhood. We should rather try to make each volition such that we would not be unwilling to have each act repeat itself. The duty of educators in placing children under favorable circumstances for forming habits was urged, and the practice condemned of training the reason and judgment before they are fairly developed, and, in the case of those who are to gain their future livelihood by manual labor, leaving the eye and hand unskilled

until the bodily habits are fixed. The subject of heredity was then brought forward to show that spontaneous action may be traced back to conscious efforts. Habit and heredity were shown, in augmenting the sphere of involuntary action, not to be limiting and restrictive in their tendency, but to furnish a condition of the highest development.

The oration, which was listened to by a large audience of members and their friends, was referred to the publishing committee with directions that it be published in the Proceedings.

A committee on the prize offered by Dr. T. A. Foster, of Portland, for the best thesis on some medical subject, reported that no papers had been presented. Dr. Foster thereupon stated that the amount offered as the prize for this year would be given to the Maine General Hospital, and he renewed his offer for the coming year.

DISTRICT REPORTS OF THE MASSACHUSETTS MEDICAL SOCIETY.

As this is the first year in which these reports have been offered, we here insert, by way of explanation, the votes of the councilors of the state society under which the reporters were appointed: —

"*Voted*, That the committee to procure scientific papers, in addition to their already established duties, be instructed to obtain from each district society an annual report on cases of importance in the district, the public health thereof, or any subject of local interest connected with the practice of medicine or surgery; the said report to be presented to the state society at its annual meeting.

"*Voted*, That said report be obtained through a committee, or single reporter, to be chosen from year to year, in advance, by the district society at its annual meeting, or by the committee to procure scientific papers, if the district society neglect or fail to make the choice at the time aforesaid.

"*Voted*, That the committee to procure scientific papers may select portions of these reports to be read, if time permit, at the annual meeting of the state society; and that the committee on publications may publish such portions, or whole reports, as experts shall designate as worthy of publication.

"*Voted*, That the chairman of such district committee, or, if no committee, the district reporter, whose report shall be deemed by experts worthy of publication, may have his annual assessment remitted for the year next ensuing, on application to the treasurer of the state society."

It will be seen that there is considerable latitude allowed in the choice of subjects for a report, so that if the reporter does not meet with that encouraging response which he had fondly hoped from those whom he calls upon to assist him from the stores of their experience, he is at liberty to write on any practical subject of local interest. It is hoped that by means of these reports the history of epidemics, or of noteworthy individual cases of disease or injury, which do not find their way into the reports of the local or state boards of health, or into print elsewhere, may be annually contributed; that the results of new or existing methods of treatment may be made known; in

short, it is desired that the district reporter shall be a medium of communication to the state society with regard to any and all matters of professional interest in his district.

It is suggested that the district societies should authorize their reporters to send a printed list of the questions regarding which they wish information to the members of the societies annually, with the expectation that the object in view will prove of sufficient interest to elicit responses from many, perhaps the majority, of those whose experience would be most valuable.

We take pleasure in publishing this week a remarkable case of extirpation of the uterus from the annual report of the Bristol North district, also a part of the report for Worcester district containing a series of interesting cases of rheumatism treated with salicylic acid. Such groups of cases are valuable, as it is only from the results obtained by a large number of observers that we can look for satisfactory evidence of the properties of this new remedy. We think that the recorded results of all cases of acute rheumatism treated with salicylic acid in Massachusetts, where the disease is so prevalent, during the coming year, would go far toward giving a scientific knowledge of the action of this drug, and we commend the subject to the district society reporters. A large number of cases might thus be briefly tabulated, and the deductions would be of permanent value. Although on this the first year the object of these appointments does not appear to have been fully understood, we think the result of the experiment gives promise of making valuable additions in the future to the annual work of the society.

MEDICAL NOTES.

— In our notice of the American Gynæcological Society in the last number, the name of Dr. D. H. Storer was accidentally omitted from the list of members.

— We learn from the *Medical Press and Circular* that the thin end of the wedge towards legalizing women for the practice of medicine in Russia was inserted last week, when for the first time the degree of M. D. was conferred upon a lady. The fair possessor of the doctorate is Madame Roudneff, who entered the medical academy as a free scholar in 1868, and, after having completed her course of study, left the establishment with the gold medal, and soon afterwards went up for her doctor's degree. Referring to the subject, the correspondent of the *Standard* newspaper says it is generally allowed that Madame Roudneff defended her dissertation with remarkable ability, and she was highly complimented by all the members of the faculty who were present.

— The *Record* informs us that delegates have been chosen to the International Medical Congress at Philadelphia as follows: By the Medical Society of London, England, William Adams (president), Drs. J. Langdon Dower and Richard Davy (honorary secretary). By the Medical Society of Copenhagen, Drs. Edmund Hansen (president), Carl Lange, and S. Engelsted. By the Pathological Society of Dublin, Mr. Joliffe Tufnell and Prof. William Stokes. By the Waterloo County Medical Society, of Canada, Drs. D. L. Walmsley, G. W. Bingham, T. W. Vardon, J. H. Webb, D. S. Bawlley, and

J. P. Jackson. By the Medizinischer Verein, A. Griefswald, Professor Hüter. By the Obstetrical Society of Edinburgh, Drs. Alexander R. Simpson (president) and Finlay. In all cases such delegates are chosen as express a desire or intention to be present. The following gentlemen, in addition to those previously mentioned, will also attend the congress: Henry Power, of London, J. A. Estlander, of Helsingfors, Alfred Haviland, of London.

— The first number of the *New York Medical Record* for July contains a new arrangement of its material. The editorial articles are upon the first page. The main body of the journal is devoted to society reports, which appear to have crowded original articles from its columns. This journal is conducted with its customary enterprise.

— At a recent meeting of one of the medical societies of Cincinnati, Dr. Comegys remarked that for more than ten years he had treated the vomiting of pregnancy with complete success by the use of atropine in doses of from one sixtieth to one eightieth of a grain, as often as was necessary to bring the patient under its moderate influence.

— At a recent meeting of the Dublin Obstetrical Society, as reported in the *Dublin Journal of Medical Science* for May, 1876, A. V. Macan, M. B., gives an account of a case of complicated labor, in which collapse from post-partum hæmorrhage was successfully treated with the subcutaneous injection of ether. The patient, aged thirty-three, in her eleventh pregnancy, had a long and tedious first stage of labor, the uterus being greatly over-distended by hydrops amnii. After the rupture of the membranes the uterus remained for a long time in a state of complete inertia, and after the birth of a monstrosity there were post-partum hæmorrhage and retained placenta. Pressure failing to expel the placenta and to cause the uterus to contract, the after-birth was with difficulty removed by the hand introduced into that organ. Even then the uterus remained large, and notwithstanding the administration of laudanum, chloric ether, and brandy, the patient's condition remained very critical. The reporter then determined to try the subcutaneous injection of sulphuric ether, as recommended by Professor V. Hecker, of Munich. Examination showing that there was still a small amount of blood flowing from the vulva, Dr. Macan determined to combine the injection of the perchloride of iron into the uterus with the subcutaneous injection of ether. He injected two syringefuls, or about half a drachm, of sulphuric ether well into the subcutaneous cellular tissue of the abdominal walls, and then injected about six ounces of the usual solution of iron into the uterus. Before he had finished injecting the iron the pulse returned at the wrist, and emboldened by this he injected a third syringeful of ether. The effect produced was marked; the woman soon turned of her own accord on to her side, and said that she felt better. The patient made a good recovery.

Dr. Macan further stated, regarding the subcutaneous injection of ether that the quantity to be used depends on the patient's pulse. Professor Hecker frequently injects fifteen syringefuls, about half an ounce, from three to five at a time, at short intervals. The injection syringe should pass deep enough into the abdominal walls, else troublesome abscess may ensue.

The president, Dr. Atthill, in commenting on the case, said that he had suc-

cessfully employed the same treatment in one case where the patient was pulseless, cold, and apparently dying from loss of blood. Stimulants were vomited. He injected two syringefuls, about a drachm, of ether into the substance of the teus muscle. Within a moment or two the pulse was felt at the wrist, and in the course of two hours he was able to leave the patient.

BOSTON CITY HOSPITAL.

SURGICAL CLINIC.

[SERVICE OF DRS. HOMANS AND INGALLS.]

Compound Fracture of Radius. — The patient received a large, ragged wound on the anterior aspect of the fore-arm, about four inches above the wrist-joint, by falling on a circular saw. The soft parts were badly lacerated, the radial artery was laid bare, and the radius was broken and comminuted. He could move only the thumb and fore-finger. A splint was applied to the dorsal aspect of the fore-arm, and the wound was dressed with a weak solution of carbolic acid.

The radial artery, with some of the surrounding tissues, sloughed in a few days, but there was no hæmorrhage of consequence. He also had an attack of facial erysipelas, but the wound was apparently unaffected by it.

Ten weeks after receiving the injury, the wound was nearly healed. There was good union of the fragments, but the hand was nearly useless; whether he will gain any use of the fingers in the future, time only can tell. As almost any kind of a hand is better than none, it seemed justifiable to make the attempt to save it.

Compound Fracture of the Tibia and Fibula. — A laborer, aged thirty-five, was run over by a horse-car on the 13th of April. He was brought to the hospital soon after the accident, and found to have sustained a compound fracture of the lower end of the left tibia and fibula. The ankle-joint was opened. The wound was situated over the fracture of the fibula, and a portion of the soft tissues was protruding.

The leg was placed in a fracture box, and the wound dressed with a weak solution of carbolic acid. With the exception of a slight sloughing of the bruised tissues the lesions healed well.

Six weeks after the injury the union of the fragments was strong enough to allow the patient to get about on crutches. No immovable bandage was applied. In eight weeks he was discharged, well.

Compound Fracture of the Femur. — John P., fourteen years old, fell twenty-five feet from the roof of a house, striking on his right side. On entering the hospital it was found upon examination that he had received a compound fracture of the right femur at the junction of the middle and upper thirds. Fortunately the wound was small, and the tissues not much lacerated. The fracture was treated by extension in the usual manner. The wound healed perfectly in a fortnight. There was considerable union of the fragments at the end of a month, with a shortening of the limb of three fourths of an inch. A dextrine bandage was applied, and in six weeks from the date of the injury he was discharged, nearly well.

Compound Fracture of the Radius and Ulna. — Mary F., aged eighty-eight years, received a compound fracture of the left fore-arm, on the 13th of June, by the falling of the ceiling of the room. The fracture was situated in the middle third, and implicated both bones of the forearm. There were three wounds of the skin over the point of fracture, each an inch in length.

The arm was placed upon a pillow, supported by a straight splint, and the wounds dressed with a weak solution of carbolic acid. The next day the patient was delirious. She tore off the splints, struck her attendants with her fractured arm, and thrashed it about in all directions. The limb was finally secured in splints, and the healing process went on as rapidly and as well as it ever does in an adult.

The delirium gradually subsided, and at the end of three weeks all the wounds were soundly healed, and there was considerable union between the bony fragments.

The result in this case was remarkable, considering the age of the patient and the violent disturbance of the injured limb.

Several years ago, while we were serving as house surgeon under Dr. Thorndike, there was a man in the hospital under treatment for a fractured humerus, who was ninety-five years old. He had not a tooth in his head, his diet was principally milk, and he slept most of the time. Strange to say, his fracture united as quickly and as soundly as such lesions usually do in middle-aged people.

All the cases reported above, except the last, were treated in the new, one-story pavilion, and the favorable results were probably due in a great measure to this fact. So many severe cases treated at the same time in one ward have never done so well before in this hospital. GEO. W. GAY, M. D.

LETTER FROM BERLIN.

MESSRS. EDITORS, — The fifth congress of the German Society of Surgery was in session in Berlin from April 19th to the 22d inclusive. Though the proceedings are now five weeks old, they are not yet fully published in the German journals; my own delay in sending these meagre notes is perhaps an illustration of the reportorial life of German journals in general.

The session was opened by an address of welcome from the president, whose name is thus registered upon the published roll of members: Geheim-Ober-Medicinal-Rath und Professor in Berlin, Dr. von Langenbeck. The following is the list of papers of the first day, with their authors: —

The Antiseptic Treatment of Wounds in Military Surgery, by Professor Esmarch, of Kiel; On the Lister System of the Treatment of Wounds in the Clinic at Freiburg, by Professor Berus, of Freiburg; On a New Apparatus for the Antiseptic Closure of Wounds, by Professor Trendelenberg, of Rostock; On a Modification of Lister's Bandage, by Dr. Burchardt, of Berlin; On the Cotton-Wadding and Tannin Bandage, by Dr. Graf, of Eberfeld; On the Open Treatment of Wounds, by Dr. Burow, docent at Königsberg; On Hæmorrhage succeeding the Use of the Artificial Blood-Vacuum, also by Esmarch; On

Catgut Suture in Wounds of the Uterus after the Cæsarean Operation, by Dr. Martin, of Berlin; Classification of the Causes of Death in Surgical Cases, by Professor Heineke, of Erlangen. It will be observed what the tendency of the surgical mind of Germany is to-day by the bare enumeration of the titles of these papers, Lister and the antiseptic plan forming three fourths of the material of the first day alone.

I will allude only to Professor Esmarch and his first paper. It is very erroneously supposed in some quarters in Germany that he is the inventor of what is correctly known as the "Lister antiseptic treatment" of surgical wounds. Without doubt Esmarch has modified the original details of Joseph Lister, of Edinburgh; that, however, does not relieve one's astonishment at the error, for in point of chronology Professor Bardeleben, of Berlin, in the surgical clinic of the Charité, in that part of the buildings known as the "Sommerlazarat," first introduced it into Germany in March, 1872; since this time it has been successfully prosecuted in his wards, and is one of the most familiar practices under Bardeleben. I may add that in this clinic is the system so simplified that its cost is one tenth of the original Lister antiseptic system. Its use in Langenbeck's clinic was later adopted. A brief detail of the apparatus constituting this system, as used here, will not be out of place. As one enters Langenbeck's theatre in Ziegelstrasse he sees a number of quart bottles with a rubber spray attachment, and filled with a solution of carbolic acid of the strength of one per cent. Two assistants work these bulbs, one on either side of the part operated on, during the whole time of the operation: that is, more accurately, from the moment of the knife-touch until the surgical wound is firmly sealed with the various dressings. The operating instruments lie in a quadrangular cut-glass dish in a similar solution, being entirely protected from the air. The sponges upon the rods, as well as the rods themselves, have previously lain in a similar solution, which occasionally receives the addition of one per cent. of salicine. The sutures are catgut of different sizes, and lie in small vials of carbolized oil; those for use about the face are the smallest, and are numbered 0. I may add here that Schweigger uses catgut for all operations upon the lids, conjunctiva, and muscles of the eye. After an operation Langenbeck spends considerable time in spraying the parts with carbolic acid and salicine, also with ice-water, if the exposure to ice-water is admissible. After the sutures, layer after layer of antiseptic cotton is used; or, if there is danger or inconvenience from hæmorrhage, alternate layers of styptic and antiseptic cotton. Cotton, with a tannin or a chloride of iron solution, alternating with the white carbolic acid cotton, is, to the American eye in this centennial year, very pretty to see in a Berlin clinic. It suggests the American flag. A very light carbolized gauze bandage envelops the whole firmly, if the part is an extremity; or, if a bandage is impracticable, the dressings are covered with colored oiled silk, and fastened down by collodion. If the wound is to suppurate, as after the amputation of a tumor or an extremity, a drainage-tube of caoutchouc, long enough to reach the farthest point in the wound, with a calibre of at least one to one and a half centimetres, and supplied on all sides with enough holes to make the drainage perfect, but at the same time with not so many as would weaken the rubber and bend it on itself in the wound, is used,

over which the edges are firmly drawn together. These tubes are also kept in a weak carbolic solution. The same devotion to antiseptic agents, chief of which is carbolic acid, is maintained in the clinical wards of Langenbeck and Bardeleben; that is, one nurse sprays with the solution while another changes the dressings. In this connection I may add a statement of Langenbeck, made in December, 1875, to the effect that since the war between Prussia and Silesia, known as the war of 1866, but one case of diphtheritic gangrene had occurred in his clinic. That was a case, then before him, of removal of an angioma cavernosum from the outer end of the left clavicle. He cauterized the whole gangrenous surface with three actual cauteries, bringing to view the outer half of the clavicle, the spine of the scapula, and the apex of the shoulder-joint. In the treatment of wounds on this plan the rule is, if there is no surgical fever or œdema, they are left to themselves for several days. Some one once remarked to Mr. Lister upon the filthy appearance of his wounds, that had been undressed for a week. Said he, "Regarded æsthetically they are, indeed, nasty; but I assure you they are absolutely clean." Langenbeck's clinical room is charged with the mixture of carbolic-acid gas and animal exhalations to such an extent that it easily falls into the same category of ventilation as the ordinary German restaurant with its tight windows and foul smoke. Such is the Lister antiseptic plan as used in Berlin; the same general apparatus is used all over Germany. Its general reception is explainable as well on the ground of its light weight as on that of its healthy properties; and this in view of the cumbrous surgical appliances which one sees in the German shop-windows.

The other papers upon surgical dressings for the first day of the session were, as may be seen by their titles, suggestions as to modifications of the bandage, its medication, etc.

A word about Esmarch. His *personnel* is striking. He has a tall, erect figure, long head, wears a full and very gray beard, dresses in black after the English fashion, and carries a face which indicates control of the habits and a youthful temperament. He speaks but little in the sessions, and is then listened to attentively. He is in marked contrast to Volkmann, of Halle, a man of apparently equal regard as an authority, but whose many short speeches and annoying objections detract from the mature regard to which his achievements justly entitle him.

The papers of the second day were devoted chiefly to the bones, — to the pathology of their diseases, and their operative interferences. Professor Berus, Freiburg, demonstrated the use of the plaster mold in luxations and resections of the ankle-joint. His plan in the latter cases is to apply the cast of gypsum immediately after and over the antiseptic dressings, and not to remove it until the wound is ready for its final removal. By the drainage-windows every facility for discharge is furnished, and he claims to have seen no surgical fever. Volkmann has had experience with caries of the ankle, fistulæ and fungous growths being usually associated. Langenbeck was favorably inclined to the gypsum dressing, especially in the ankle-resections of children.

Dr. Weber-Liel, privat docent of Berlin, demonstrated the use of the microscope in diagnosticating affections of the membrana tympani. He has

for some time used in his clinic a short, light, "children's microscope," of fifteen-diameter magnifying power, whose object-glass, wrapped around with caoutchouc, is inserted like an ordinary speculum into the meatus of the ear. It rests with safety, and is held by the same hand whose fingers make traction on the auricle. Light is reflected from a convex mirror, at forty-five degrees, which is adjusted in a stationary position in the cylinder of the microscope and in focal distance from its object-glass. Its use was demonstrated upon a prepared temporal bone and membrana tympani, artificial light being thrown upon the stationary mirror lying in the cylinder of the microscope, and being screened from the eye of the observer. A rubber tube is firmly waxed to the annulus on the side of the tympanic cavity, by which the observer may draw in by suction, or push out by blowing, the membrane, at the same time that both hands are free to manipulate the instrument. I have repeatedly observed the excursions of the membrane in his clinic, where the movement was made either by inflating the Eustachian tube or by a large rubber tube attached to the cylinder of the microscope. The points clearly brought to view in the living, healthy membrane by this power are the arteries on either side of the handle of the hammer, small and otherwise undiscoverable cicatrices, the result of healed perforations, and the very unequal movements of the different quadrants of the membrane. As a means of diagnosis it must surpass Sieglé's otoscope. Its introduction before the Surgical Society was inopportune, and the interest taken in it was as a matter of curiosity rather than as an adjuvant in surgical diagnosis.

Professor Maas, of Breslau, read a paper upon the regeneration of bone, with especial reference to the formation of callus, in which he took strong ground in favor of the periosteum as the principal agent in regeneration, in time and amount; that is, the periosteal callus proceeds early and in large quantity to form bone, its last function being to unite with the feeble and as yet distinctly provisional callus of the medulla.

The third day was a "field day," and was devoted to the introduction of new instruments, apparatus, and patients.

Maas presented his patient with extirpation of the larynx, and demonstrated the specimen extirpated. The subject was a robust countryman, above fifty years of age. He was then wearing a large tracheotomy tube, through which respiration could be heard at any point in the room. Removal of the tube occasioned no disturbance in respiration. The wound looked healthy, and was free from tenderness. Of Langenbeck's case, operated on July 21, 1875, and described in the JOURNAL of April 13, 1876, under the head of Recent Progress in the Treatment of Diseases of the Throat, I can only add a statement of the operator to the effect that the cricoid, thyroid, and arytænoid cartilages were extirpated. Photographs of this case were presented.

Volkmann, under the head of Casuistische Mittheilungen, described two cases of resection of the knee-joint for tuberculosis, in girls of fourteen and six years of age, and showed photographs of the same in right-angled anchylosis; the dressing was by Lister's method and the plaster cast; healing in both cases was by first intention, without any surgical fever, and without a drop of pus. It is proper to add in this connection that Volkmann's brochure on the Lister-

antiseptic treatment has been translated into English, and is used by Lister himself as one of his, as we would say in America, best advertisements.

Esmarch showed a cooling cover for the trunk (kühldecke), whose purpose is to lower the temperature of the general surface of the trunk, or of the contents of the thorax or abdomen in inflammation. It is a thick rubber sheet three and a half feet long by two and a half feet wide, nearly square, being of sufficient size to cover the body from the shoulders to the hips. One side is flat, and applies directly to the front side of the body as the patient lies on the back. The other or upper side has cemented to it a long rubber tube, calibre five eighths of an inch or about one and a half centimetres, which, beginning at the upper border of the rubber cover, is coiled in reverse turns from side to side until it reaches the lower border. By this contrivance an open tube of several feet in length, firmly attached by rubber cement to the cover, passes over the body. The idea is to transmit cold air, or, what is better and easier of management, cold water, continuously over an inflamed surface. A few inches of unattached tubing at either end project from the sheet, at the upper to allow water to be introduced, at the lower to permit its escape without wetting the mattresses of the patient's bed. In the apparatus presented there were thirteen reverses of rubber coil. Multiplied by two and a half, the width in feet of the sheets, there were more than thirty-two feet of water, in a solid column of five eighths of an inch, flowing of course slowly, to support as weight; this is to be added to the combined weight of the sheet, coil, and cement. To conjecture the weight of the cover by holding it at arm's length, I should say that twelve to fifteen pounds would be a safe estimate. The element of weight alone must render the use of cold water by this means in inflammation of the lungs, pleura, and intestines very questionable, although theoretically the idea is an excellent one. The apparatus was much admired for its neat mechanical look.

Langenbeck detailed the following operation, producing the patient. On the 22d of February, 1876, a young man twenty years of age presented himself at the Ziegelstrasse clinic with a large, tough, nearly transverse cicatrix at the middle of the posterior aspect of the thigh. Leg and thigh were in progressive atrophy, and the patient was very lame. The history bespoke section of the sciatic nerve, the result of a very severe wound received two and a half years before. It was proposed to unite the ends of the nerve. A long incision, parallel to the axis of the nerve, was made, when, after dissection, the ends were found to lie five centimetres (two inches) apart. The proximal stump was hypertrophied, "swollen," as I heard it described on the day of the operation, to nearly three times its natural size. The distal stump had a similar appearance, though not so exaggerated. Each end was pulled towards the other with the hands, the ends vivified with the knife, and three strong catgut sutures passed *through* each end from side to side, the faces being brought fast together. The superficial wound was stitched with catgut, and dressed with Lister's bandage. The leg was flexed on the thigh to preserve contiguity of nerve-ends, and laid in temporary flexed splints. After complete healing of the external wound he proposed to use the continuous current. At the clinic Langenbeck described a case of section of the median nerve by a gunshot wound, where he united the *edges* of the ends, with a good result as

to final nerve power. He further detailed a case of an officer who was wounded by a large ball under the coracoid process of the scapula, and who suffered total paralysis of the arm. The severed nerve healed by granulation, as could be seen on account of great defect in the soft parts. The axillary artery was brought to view, and its pulsations could be marked with the eye. In this case there was total section of the nerve, followed by complete union, and after a long time complete restoration of the excursions of the extremity. The patient, operated on in February, has regained partial control of motion and sensation, and the leg and thigh are larger than before the operation. The wound is entirely healed, and pressure at the point of nerve union fails to produce exquisite pain. The continuous current is now his only treatment.

On the fourth and last day of the session Dr. Riedinger, docent in Würzburg, read a paper on fractures of the pelvis, showing preparations. Professor Langenbeck exhibited Adam's trap-door saw for the subcutaneous osteotomy of the neck of the femur; also the extension apparatus brought out by Dr. Joh. Schmall, of Gratz, and improved by the bandagist Heuberger, of Gratz. Papers were also read on a modification of the Esmarch irrigator, by Dr. Burchardt, of Berlin; on perforation of the mastoid process, by Dr. Hartmann; on an experience in the correction of foot-deformities by means of the plaster bandage, by Professor Heineke, of Erlangen; on the operative treatment of intestinal hernia, by Dr. Hadlich, of Heidelberg; on the mechanical interferences of the evacuation of the bladder in old persons, by Dr. Busch, of Bonn, etc. Professor Uhde, of Braunschweig, exhibited specimens of resected bone, with photographs. Dr. Wolff, docent of Berlin, demonstrated a case of elbow-resection. Dr. George Wegner, for a long time attached to Langenbeck's clinic, and who did important work on Billroth's Surgical Pathology, presented the results of some experimental observations upon the ovaries of rabbits, with reference to human ovariotomy. As to temperature, the removal of the ovary in the rabbit was followed by a higher grade than in the human female. The statement was made that, two hours after the operation of ovariotomy, the temperature of the abdomen reached as high as 35.5° Réaumur, while that of the operating-room itself should be above 24° Réaumur. Ovarian tumors occasion venous stasis, after whose removal air must rush in to fill their former habitat, this agent slowly receding on the imbibition of serum. The final removal of the serum is and must be by absorption, and it is exactly here that the danger following an ovariotomy lies, namely, the insufficiently rapid absorption making septicæmia liable.

He approves of Dr. Sims's drainage-tube, the use of which, as I saw it at the New York State Woman's Hospital in 1873, was a questionable procedure in the eyes of his colleagues. He does not use the Lister antiseptic plan in ovariotomy cases, as to closure of cavity of the abdomen and external wound, but simple injections of weak carbolic acid. German statistics give results much inferior to those of Sims and Wells. It is significant that the former announces twenty successful cases of ovariotomy in succession, followed by seven unsuccessful ones — an evidence not so much of a peculiar method of operative procedure, as of extraneous influences, either in a fortunate selection of cases or of time of the year. I regret that it is impossible for me to give

more detailed notes of this paper, which was allowed two sessions of half an hour each, an unusual indulgence for the surgical society. Its rather novel experiments and exhaustive character, added to the well-known philosopical style of argument of the author, gave it in some respects the greatest prominence of the meeting.

Some features of the session may be of interest on our side of the water. At the entrance-door of the afternoon meetings, which were held in the upper hall of the Royal University, sat an official, one of whose functions was to see that every auditor had an "Eintritts-Karte," and to furnish him with the printed register and statutes. The morning sessions were held in the Siegelstrasse amphitheatre, known for its steep descent and high-backed seats. The sitting-places are solid benches, themselves so high that one's feet cannot reach the floor. It is one of the most unsightly and dangerous theatres imaginable; it will next year be replaced by a new and much larger building, on whose ground floor will also be held the University ear-clinic by Lucae, and the eye-clinic by Schweigger. The following statutes will explain the *technique* of the society. Sessions are annual, and from the 10th to the 13th of April inclusive. The time may, however, be postponed at the option of the president. The following officers are annually elected, and constitute the bureau of the congress: a president, vice-president, two secretaries, and a treasurer. This bureau has jurisdiction over changes in the statutes and daily programme of work; determines the eligibility to membership; provides for the publication of the proceedings; and takes charge of the archives and moneys of the society. The annual assessment is twenty marks, about five gold dollars. In the sessions of the congress, demonstrations take precedence of papers. The latter must not occupy over thirty minutes in delivery, though the presiding officer may exercise the liberty to add ten minutes. Discussions must be in five-minute speeches.

Aside from the names given as authors of parts in this congress, the following prominent surgeons are members of the society: Professor Thiersch, Leipzig; Professor Baum, Göttingen; Professor Bergmann, Dorpat; Professor Billroth, Vienna; Professor von Bruns, Tübingen; Professor Grafe, Halle; Dr. Grimm, general staff physician, Berlin; Professor Richter, Breslau; Professor Simon, Heidelberg; Professor Hueter, Greifswald; Professor Wilms, Berlin; and Dr. Ziemssen, Aachen.

Professor Ernst Leyden, of Strassburg University, has been elected Professor of Internal Diseases, and to the direction of the corresponding department of the Charité, positions made vacant by the death of Louis Traube. He enters upon the duties of the chair with the fall semester. Traube's clinic had been conducted for some time by his son-in-law, Professor Fraentzel. It is a remarkable fact that almost the first official act of Mr. Falk, the Minister of Ecclesiastical Affairs and of Education, was to promote Traube to the position of ordinary professor. This was in 1872. Traube was made privat docent in 1848, and, although in the succeeding twenty-four years he became Schoenlein's assistant, and ultimately had his own clinic on chest diseases, his Jewish proclivities prevented his proper recognition by the Prussian state. His promotion was the direct effect of the policy of Bis-

marck, and his lieutenant, Mr. Falk. It not only recognized the talents of a great man, but indicated the political thought of the German confederation. The renowned Graefe suffered in the same way, having never lectured at the Charité as a professor; the cause of his treatment by Prussia was based, however, on other grounds than those of Traube. I learn that their misfortunes at the hands of the university and the government made them strong personal friends.

A sketch of Virchow as a politician, by Herbert Tuttle, of Berlin, formerly of Boston, is just out of the press of Putnam, of New York. So far as I know, it is the first sketch in English of this versatile genius. He is now the leader of the party of progress (*Fortschrittspartei*), in whose service as a political leader he has worked since the events following the Revolution of 1848. The sketch attributes his early prominence as a politician to his authorship of the System of Cellular Pathology. It forms one of nineteen sketches of the book, whose title is German Political Leaders. Virchow is classified with the "scholars in politics."

To-day's papers contain the following telegram from Hanover: General staff physician on duty, Dr. Louis Stromeyer, who a short time ago celebrated the fiftieth anniversary of his doctorate, died in Hanover, on the 15th inst. at ten A. M., of apoplexy, in his seventy-third year.

Yours truly, MED.

BERLIN, PRUSSIA, *June* 16, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 1, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	636	31
Philadelphia	800,000		
Brooklyn	506,223	268	27
Chicago	420,000	164	20
Boston	375,000	148	20
Providence	100,700	26	13
Worcester	50,000	13	14
Lowell	50,000	19	20
Cambridge	48,000		
Fall River	45,000	18	21
Lawrence	35,000	7	10
Lynn	33,000	10	16
Springfield	31,000	11	18
Salem	26,000	10	20

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — Ulcer of the frænum linguæ can hardly be considered now as a *new* symptom of whooping-cough. Bouchut, of Paris, laid special stress on this very ulceration in his lectures of 1858, and has described them in his book on Diseases of Children.

Yours truly, H. C.

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VAGINAL LITHOTOMY.[1]

BY J. COLLINS WARREN, M. D.,

Visiting Surgeon to the Massachusetts General Hospital.

In August last I was requested by Dr. Alexander Jackson, of Plymouth, to operate upon a case of calculus in the female bladder. The patient was sixty-seven years of age, and when I saw her for the first and only time, on the day of the operation, was in bed, appearing much emaciated and pale. She had been suffering greatly with symptoms of cystitis for the better part of a year, and although previously healthy had become a confirmed invalid. There were no symptoms of renal complications. She was the mother of several children. The patient, being etherized, was placed in the position for lithotomy in the male, and a lithotrite was introduced into the bladder for the purpose of determining the size of the stone. The examination showed that it was not a small one, and in view of the degree of inflammation of the bladder and her advanced age I decided to remove it by vaginal lithotomy. The operation was thus performed with the assistance of Drs. Stedman and Jackson. A large bulb-pointed probe was passed into the bladder, and its end made prominent beneath the mucous membrane of the anterior wall of the vagina, at a point just behind the neck of the bladder. An incision was made into the bladder at this point, the knife cutting against the end of the probe. A pair of probe-pointed scissors were introduced into the opening thus made, and the incision was enlarged backwards along the median line to the extent of one inch. The stone was extracted by a pair of polypus forceps. The bladder was then washed out with warm water, and the edges of the wound were brought in contact with six silver wire sutures. A female catheter was retained in the bladder and the patient left in charge of Dr. Jackson, from whom I subsequently learned that she at first did well and no urine passed through the wound. Two weeks after the operation there were symptoms of abdominal inflammation, and some leakage occurred through the wound. Two months later the condition of the patient had improved greatly, and under the application of caustic the slight fistula which still remained had closed, but had reopened at the end of

[1] Read before the Massachusetts Medical Society.

forty-eight hours; Dr. Jackson had no doubt, however, that it would eventually close. Under the date of March 28th, Dr. Jackson writes, "Mrs. R. is about, feeling quite well, with the exception of a little cold recently." The stone [1] contained a nucleus, which was about the size of an almond shell, consisting of oxalate of lime, its surface being coarsely crystalline. The cortical portion which was broken into several fragments during the examination, was phosphatic. The weight of the stone was 214¾ grs.

Vaginal lithotomy, or vesico-vaginal lithotomy, as it is sometimes called, is no novelty, although the operation has been much more frequently performed since the treatment of vesico-vaginal fistula has been brought to its present degree of perfection. The employment of sutures to close the incision connecting the bladder with the vagina has placed the operation on an altogether different footing. The first operation was performed by Rousset in the latter part of the sixteenth century, in a case of procidentia and cystocele, in the cul-de-sac of which was found a stone. Fabricius Hildanus removed a calculus through a vesico-vaginal fistula, caused by its presence in the bladder, in 1598. The operation was performed in the last century and also in the early part of the present century, and was almost invariably followed by incontinence of urine resulting from fistula. Faure is, however, reported in 1808 as having avoided a fistula by cutting obliquely through the septum and thus making a valvular opening into the bladder. The first case in which sutures were employed to close the incision occurred, so far as I can discover, in the practice of Dr. Marion Sims. A fistula remained, however, which was subsequently closed by Bozeman. This is probably the operation performed by Sims in 1850. Vallet, of Orléans, employed sutures in two cases in 1856. An interesting historical account of the various operations for stone in the female is given by Hybord.[2] In 1853 Dr. William G. Wheeler,[3] of Chelsea, removed a stone weighing two ounces and three quarters, which had formed about a hair-pin three and one half inches in length through an incision in the septum. Sutures were not used, but the remaining fistula was closed many years afterwards by Dr. R. M. Hodges. Lithotomy was tried in this case without success. A case may be mentioned in this connection, occurring in the practice of M. Panas,[4] who extracted a hair-pin from the bladder by forcing it through the vesico-vaginal septum. The puncture of the septum occurred accidentally during efforts at extraction through the urethra. The pin was drawn into the vagina, straightened, and removed. In four days the patient left the hospital, no trace

[1] Examined by Dr. E. S. Wood.

[2] Des Calculs de la Vessie chez la Femme et les petites Filles. Paul Hybord. Paris. 1872.

[3] American Journal of the Medical Sciences, xxv. 361.

[4] France médicale, February 26, 1876.

of the puncture remaining. Dr. R. M. Hodges performed vesico-vaginal lithotomy some sixteen years since, closing the wound by suture with complete success. Dr. Emmett has performed this operation more frequently than any other surgeon, and it is a curious fact that in nearly all of his cases the calculus had formed after an operation for the cure of vesico-vaginal fistula. In nearly every case the cystitis was sufficiently severe to necessitate leaving the opening unclosed after removal of the stone. In some cases measures were taken to prevent closure of the wound, and when this was not done the wound healed invariably within two weeks. Dr. Emmett[1] has treated a number of cases of chronic cystitis in the female by an incision through the vesico-vaginal septum. The wound was kept open by a hollow glass stud, not unlike a spool in shape. He thinks the operation, if resorted to before the disease has advanced so far as to involve the kidneys, is as free from risk as any in minor surgery. He is satisfied that any one who has the dexterity properly to crush a stone by the female urethra can with much less difficulty close the fistulous opening after lithotomy.

This operation has rapidly increased in favor with many English surgeons. Mr. Aveling[2] was one of the first to call attention to its advantages when followed by suture. He gives a table of thirty-four cases, and adds one operated upon by himself. Twelve of these were performed by English surgeons. In all of them there is but one death recorded. In twelve given by Hybord no death occurred. Aveling believes that although lithotomy ought not to supplant the more simple process of dilatation and crushing, it should be employed when there is the least apprehension of incontinence. James R. Lane, Esq.,[3] operated upon a case in which the stone was nearly two inches in length, dividing the septum to within a short distance of the attachment of the vagina to the cervix uteri. The patient recovered eventually without a fistula, although the edges of a small portion of the wound had to be pared and sewed together subsequently. He thinks there is no part of the vesical parietes which may be incised with so little risk, and that this operation is the safest and best which has yet been devised.

This procedure has not been confined to the adult. A number of cases have been reported where it was performed upon young children. Of these may be mentioned one by Dr. Thomas Smith,[4] the child being but five years of age. The incision was made and the sutures taken without rupturing the hymen. In a second case, in a patient ten years old, he made an incision through the fourchette before cutting through the septum; four sutures were taken in the vaginal wall and three in

[1] Chronic Cystitis in the Female, American Practitioner, February, 1872.
[2] Obstetrical Transactions, 1864, v. 1.
[3] Lancet, January 10, 1863.
[4] Lancet, December 17, 1870.

the perinæum. The patient recovered without incontinence. Dr. S. H. Tewksbury [1] removed a stone the size of a pigeon's egg, through the septum, from the bladder of a girl seven years of age. The vagina was dilated gradually and a small Sims's speculum was introduced, which brought the parts well into view. The sutures were removed on the fourteenth day, when the wound was found united. Dr. Tewksbury's paper contains much valuable information in regard to the history of the operation. He thinks dilatation of the urethra is available in females who have borne children.

The operation has been performed by a number of American surgeons. Indeed, it seems to have been done more frequently in this country than in any other. Through the kindness of Dr. C. H. Mastin, of Mobile, Alabama, I have obtained the following list of surgeons with the number of cases operated on by them : —

J. Marion Sims	1 case.
J. H. Thompson, Washington, D. C.	2 cases.
J. W. Jones, Wilmington, N. C.	1 case.
Jno. T. Hodgen, St. Louis, Mo.	3 cases.
Christopher Johnson, Baltimore	1 case.
Samuel Choppin, New Orleans	1 "
J. M. Keller, Louisville, Ky.	1 "
A. H. Halberstadt, Pottsville, Penn.	2 cases.
Thos. Wood, Ohio	2 "
Thos. A. Emmett, New York	16 "
Paul F. Eve, Nashville	2 "
Charles Bell Gibson, Richmond	1 case.
Greenville Dowell, Galveston	1 "
Ferd. Herff, San Antonio, Texas	1 "
Total	35 cases.

He speaks of six other cases, the names of the operators not being given, making in all forty-one cases.

I have recently obtained the notes of a case performed by Dr. H. O. Marcy, of Cambridge, in April, 1874. The patient since her confinement in February, 1873, had suffered from cystitis. After an attempt at crushing, having first dilated the urethra, and failing through the size and hardness of the calculus, vaginal lithotomy was performed. The incision was made in the median line, commencing about one inch from the urethra, and was continued to include a small portion of the cervix uteri, to allow the extraction of the stone, which weighed over one ounce, and was rough and hard. It was chiefly phosphatic and contained as a nucleus a few fibres of cotton. The wound was brought together with fine silver sutures and united in its entire extent. A minute opening was left, however, at the point of entrance of one wire, which has not closed, although an attempt has since been made to close it.

It will be gathered from the testimony given above that lithotomy is not

[1] Transactions of the Maine Medical Association, 1871.

a difficult operation to perform on the female. This fact appears to have struck forcibly all operators at their first effort, and none more so than myself. The patient being placed in the position for lithotomy, when the labia were separated the anterior wall of the vagina was seen hanging like a curtain at the mouth of the vagina. So superficial was this part that it could be incised and sewed with nearly as much facility as the perinæum. The operation appears to be attended with little or no danger, hardly a single death being reported; on the contrary, in cases where the attending inflammation is severe we find that it not only removes the cause but exerts a curative influence upon the inflammation itself, provided we simply avoid using the suture. The only real danger is from a failure of union of the wound, and this with our present knowledge of the treatment of vesico-vaginal fistula has been reduced to a minimum. Incontinence resulting from this cause is far more easily remedied than that which follows from over-distention and paralysis of the urethra.

A very old method of removing calculi from the female bladder, and one which has been growing greatly in favor of late, is extraction through the dilated urethra. Franco [1] proposed this operation in 1561. Collot combined dilatation with crushing in 1669. This was a favorite method with Sir Astley Cooper, who performed it three times without incontinence resulting. Dr. Yellowly [2] mentions a number of cases where stones of extraordinary size have passed the urethra. In a case which occurred in his own practice the stone weighed over three ounces. In another case the patient, having suffered greatly and after having experienced "an uncommon weight and forcing" on one occasion, brought away, "with a noise which very much surprised the whole company," a stone seven and a half inches in circumference. In all the cases given by him there was permanent incontinence subsequently. This danger of incontinence appears to have been recognized at an early period. Tolet [3] found that if dilatation was excessive, the fibres of the urethra could not contract, and incontinence followed. Brodie [4] says, "I suspect that there is no method of removing it entire from the female bladder without incontinence of urine to a greater or less extent being a consequence of the operation." Vaginal lithotomy with suture was of course not then known. In three out of ten cases mentioned by Hybord there was incontinence subsequently. Mr. Bryant [5] reports two cases of calculus removed by rapid dilatation, which was effected by Weiss's dilator, a steel instrument with three branches, used, I believe, originally by Sir Astley Cooper. In his first case the shortest diameter

[1] Franco, Traité des Hernies, page 140.
[2] Medico-Chirurgical Transactions, vol. vi., 1815.
[3] Traité de la Lithotomie. Paris. 1708.
[4] The works of the late Sir Benjamin Brodie, ii. 649.
[5] Medico-Chirurgical Transactions, vol. xlvii.

of the calculus was one inch, and the age of the patient fifty-two years. In the second case, although the stone was caught in one of its shortest diameters, it measured with the forceps exactly two inches. The patient was thirty-five years old. In both cases was control gained over the bladder for several hours. Mr. Bryant has collected twenty-eight cases, in thirteen of which slow dilatation was employed and in fifteen rapid dilatation. Among the former there were four cases of incontinence; in three of these, however, the stone was very large; among the latter there were none. He much prefers rapid dilatation, and states that "in children calculi one inch in diameter and in adults two inches may be safely removed by these means." Mr. Bryant extracted a lady's stiletto from the bladder, guiding it by the finger introduced through the urethra. No incontinence followed.

Spencer Wells cautions against dilatation. A large stone, he says, may be removed and no incontinence follow, but incontinence might result from the removal of a very small calculus. (In one of Bryant's cases of incontinence the stone was not large.) Incisions into the urethra he thinks more dangerous still, and mentions cases in the practice of a surgeon of large experience where it had been done in two adults and seven children, but "they were all dribblers." He prefers lithotomy. Lane is decidedly of the opinion that dilatation of the urethra should be employed only in the removal of stones of small size, the risk of incontinence being great and the result incurable. The facility of dilatation renders it highly tempting to the surgeon, while the safety and bloodlessness commend it strongly to the patient. The consequence is that it has caused many an unfortunate woman to pass the rest of her days in a loathsome and miserable condition. No stone, he thinks, larger than an acorn should be removed in this way from the adult and none larger than a horse-bean from a child. He condemns strongly all incisions into the urethra.

When a stone is suspected, Christopher Heath [1] does not hesitate to explore the bladder with the forefinger, previously introducing the little finger or dilating with the dressing forceps. He finds in all cases that have undergone this manipulation a split in the mucous membrane under the pubes and some incontinence for twenty-four hours. After this the patient ordinarily recovers complete control over the bladder. In one case a stone three fourths of an inch in diameter was removed from a child, aged eleven years, through the urethra, and subsequently a fragment of a second stone weighing four hundred and eight grains. Incontinence in this case was permanent. For such a case he would recommend vaginal lithotomy. He cautions against the mistake of making the incision too small, the edges of the wound being bruised by a stone too large to pass through easily. He thinks there is no danger

[1] Medical Times and Gazette, April 11, 1874.

of wounding the peritoneum, even if the incision be carried up to the os uteri. In taking sutures both the vaginal and vesical walls should be included. He has operated three times: in two cases the wound healed by first intention; in the third there was a slight fistula. In one of the successful cases the calculus weighed three and one half ounces. The ages of the patients were forty-nine, forty, and fifty years respectively.[1]

During the past year medical writers have had a great deal to say about the treatment of cystitis by dilatation of the urethra. Dr. T. W. Howe [2] reported a case of cystitis cured in this way. This article has brought out a series of communications by Dr. Pridgin Teale, in the Lancet,[3] which are not yet concluded. He and several of his colleagues have employed this treatment for some time past with satisfactory results. This method consists in slowly dilating the urethra by a Weiss's dilator until the fingers can be introduced into the bladder. It is noticeable that in three instances death occurred within a short time after the operation; there was in these cases, however, disease of the kidneys. Two cases suffered from incontinence afterward, and Mr. Teale makes the significant remark, "It does not, however, appear that the liability to permanent incontinence depended upon the degree to which the dilatation was carried." Hewetson [4] and Heath [5] have both written upon the subject. Dr. George Jewett [6] removed a crochet-needle by introducing the index finger into the bladder through the urethra. He noticed a slight rupture at the meatus during his manipulations, but there was no incontinence. The most accurate measurements which have been taken to determine precisely how much the urethra may be dilated without running the risk of incontinence are those made by Professor Simon, of Heidelberg, and published in Volkmann's *Sammlung klinischer Vorträge*,[7] in July last. He recommends smooth, hard rubber plugs of different sizes, by which, when combined with incisions of the orifice of the canal, dilatation may be accomplished without rough handling of the urethra. This limit is two centimetres or .8 inch in width, and 6.3 centimetres or 2.4 inches in circumference. Dilatation to this size permits the index fingers of most surgeons to be passed with ease into the bladder. Simon's finger is small enough to enable him to pass at the same time a very slender instrument. A pair of polypus forceps, such as Mr. Heath uses, would, if introduced at the same time with the finger, as he recommends, stretch beyond this limit. A stone must obviously be a small one to

[1] Transactions of the Pathological Society, vol. xxvi.
[2] New York Medical Record, August 14, 1875.
[3] Lancet, November 27, 1875. Dr. T. B. Curtis, the Journal, December 30, 1875.
[4] Lancet, December 4, 1875.
[5] Lancet, December 11, 1875.
[6] The Journal, January 27, 1876.
[7] Translated in the New York Medical Journal, October, 1875.

be removed by an instrument delicate enough to pass so narrow a space. Hybord puts the limit of dilatation as high as three to four centimetres. Dr. W. W. Lawrence reports in the *Louisville Medical News* a case of stone in a girl five years of age. The urethra was dilated with the fingers, and crushing was combined with extraction. It is not stated whether there was any subsequent incontinence. Dr. D. W. Yandell reports in the same journal a case of bilateral urethral lithotomy in a girl eleven years old. The stone was crushed before removal, and weighed two ounces. There was perfect recovery. In a second case, a girl four years of age, the urethra was divided on a director a short distance behind the meatus, for the extraction of a uric acid calculus the size of a filbert. Incontinence is not mentioned. Dr. Herrgott, in an article in the *Annales de Gynécologie*, January, 1876, gives three cases in which dilatation was practiced for removal of growths from the bladder. An instrument was introduced with the finger, and the operation continued in each case upwards of one hour. The limit given by Simon was not exceeded, and no incontinence followed. In one case the author contemplates removing a remaining portion of the growth through an incision in the vesico-vaginal septum. He mentions several cases where coitus was performed through the urethra. Mention of this fact has also been made by other authors. Incontinence of urine was not present in these cases. Notwithstanding that many successful cases of dilatation with or without crushing have been reported, a high authority in this country expresses himself strongly against this operation. Dr. Emmett, in his work on vesico-vaginal fistula, says, "Comparatively, I do not regard the removal of stone in the female by the urethra as either a safe or a justifiable operation, in consequence of the great risk of incontinence of urine which frequently remains permanent. I have seen at least seven cases in support of this assertion for which no relief could be afforded, and in which I am satisfied that the accident had not resulted from want of skill on the part of the operator."

An interesting clinical lecture by Dr. Hunter McGuire[1] gives the history of a case of vaginal lithotomy in a negress forty years of age. The stone was two and a half inches in diameter. Ten wire sutures were taken and removed on the eighth day, a catheter being retained a few days longer for safe union. Dr. McGuire states that many cases of so-called successful operations by dilatation and extraction have, to his personal knowledge, been followed by incontinence, the term "successful" referring to the extraction of the stone. He says, "We all know how easily a surgeon can introduce his finger into the female bladder when the woman is under the influence of chloroform," "but it certainly is not always safe to do this." In a case at present under his care, a lady

[1] West Virginia Medical Student, May, 1876.

twenty-four years of age had been suffering with chronic cystitis, which resisted the usual remedies, and the physician had introduced his finger through the urethra to explore the bladder. Complete incontinence of urine followed. On examination he found the meatus contracted to probably its original size, but the vesical end of the urethra and mouth of the bladder loose and relaxed, with all sphincter power destroyed. He proposes to make a vesico-urethra-vaginal fistula by removing an elliptical-shaped piece of the septum, and to close it by silver wire sutures in the ordinary manner. He does not believe it is ever necessary to introduce the finger into the female bladder for the sake of diagnosis. A stone over half an inch in diameter should not be removed per urethram. He condemns urethral lithotomy as leading almost invariably to incontinence. Lithotrity, he thinks, is more difficult than in the male. The absence of the prostate gland and of the smooth fixed trigone which we find in the male bladder, the slight prolapse of the posterior wall found in almost all women who have borne children, the sometimes sacculated or perhaps displaced bladder, are some of the more important explanations of this difficulty. Byford is opposed to lithotrity for similar reasons. Dr. Savory, of Lowell, informs me that he has had a case of incurable incontinence following dilatation for the removal of a stone of small size.

Sponge tents have been employed to dilate the urethra for the purpose of removing calculi. They may be useful when the patient dreads anæsthesia, or when the stone is so small as to be voided spontaneously by the bladder on removal of the sponge. This occurred in a case in the practice of Dr. George H. Bixby, of this city, where eleven small calculi came away upon the removal of a sea tangle tent. Dr. H. R. Storer has lately removed a calculus in this way without incontinence subsequently.

Dr. Buchanan,[1] of Glasgow, has performed the operation known as lateral lithotomy on a girl six years old. The operation resembles closely that performed on the male. A rectangular staff being introduced and held under the arch of the pubis, an incision is made into the left nympha, care being taken to avoid opening the vagina on the one hand and cutting too near the tuber ischii on the other. The left forefinger, introduced into the wound, feels with its nail the staff, and the knife guided along the nail is passed through the neck into the bladder. In his case there was some difficulty in retaining the urine at the last account. Dr. Morton operated in this way on six cases, with what is stated to be a favorable result. Mr. Lane believes it to be an excellent operation, and admirably adapted for children. Dr. David Foulis[2] made a dissection of the bladder of a woman on whom this operation had been

[1] Medical Times and Gazette, May 3, 1862.
[2] British Medical Journal, No. 786, page 115.

performed twenty years before, and who died of renal dropsy. A conical opening was found in the left labium minus from which ran a canal opening into the urethra and also into the vagina. The patient had been able to retain her urine, however.

In examining the records of the Massachusetts General Hospital I find from 1821 to 1868 seventy-nine cases of stone reported, of which nine were in females. From 1821 to 1871, a period of fifty years, there were but ten cases of stone in the female. Of these calculi two were extracted through vesico-vaginal fistulæ, one being removed entire, the other being crushed previous to extraction. Five were treated by lithotrity, and in three cases the stone was extracted through the dilated urethra. Of the latter, one was a stone weighing two hundred and eighty grains; the urethra being dilated, it was seized by a pair of forceps and attempts were made to crush it, but without success. It was finally extracted through the urethra. Death occurred two days later, and at the autopsy the urethra was found considerably dilated, and in that portion below and a little to the right of the arch of the pubis was an irregular laceration more than one inch in length, extending into the bladder. It had the appearance of being due to sloughing of the part. The ureters were dilated and the kidneys diseased. In the two cases the urethra was found considerably dilated before the operation. In one a stone three fourths of an inch in diameter was extracted and no incontinence followed. In one case three calculi were extracted, one being the size of a large peach-stone. There was a small fistula in this case, which was subsequently operated upon. The records of many patients operated upon during this period are not to be obtained, they having been treated as out-patients. Dr. C. B. Porter has recently removed a calculus from the female bladder through the dilated urethra. The calculus was partially crushed previous to extraction. Dilatation was not carried beyond Simon's limit. There was no incontinence.

There are several methods of treating stone in the female which have not been discussed in this paper. Lithotrity, for instance, has been scarcely alluded to. My object has been to contrast the operation of vaginal lithotomy with one which has been employed in a class of cases to which that operation is mainly suited, and to discuss the comparative merits of two methods of operating which are now coming into fashion.

Lithotrity is undoubtedly as simple and harmless an operation as any, in the hands of a skillful surgeon, provided its use is limited to a certain range of cases. It was attempted, as has been seen, in several cases where extraction of the stone was subsequently resorted to. I recall one case where this treatment was carried through a long series of sittings. The patient was cured of her stone, which was a very large one, but died, a few months later, of exhaustion. Vaginal lithotomy might have saved her. Large stones have been crushed and removed at one

sitting, in both males and females. The alternative in the male is a capital operation ; in the female, on the other hand, one which has been placed within the domain of minor surgery. We are not, therefore, authorized in females, as we are in males, to take any great risk. I think we may safely say, therefore, that lithotrity should be confined to cases where the stone is neither large nor hard. Dilatation of the urethra combined with lithotrity would enable us, however, to remove a much larger stone at one operation than by lithotrity alone. The dilatation must be done rapidly but gently, and certainly must not exceed the limit given by Simon. (I do not think it is fully proved that we may not have incontinence following dilatation even within this limit, although such an occurrence is not likely.) If the stone be hard, but small enough, it may be extracted whole through the dilated urethra. If, on the other hand, the stone is large and there is much cystitis, or the patient is feeble, or we have reason to suspect trouble in the kidneys, vaginal lithotomy should be the operation. We should be on the safe side in giving this operation the benefit of the doubt when there is any question of choice. The age of the patient is not a contra-indication to the operation, although I believe that it is rarely necessary to perform it upon children, who bear lithotrity well. Vaginal lithotomy, it is hardly necessary to point out, is far preferable to the supra-pubic operation.

In conclusion, we may say that vaginal lithotomy, involving at the worst a danger completely within our control, may be employed in a much wider range of cases than it has been hitherto ; while dilatation of the urethra, entailing, it may be, an infliction which it is beyond our power to remedy, should be practiced with great caution, until we more fully understand the class of cases to which it is suited and have determined with greater certainty the limit to which it can be carried.

RECENT PROGRESS IN PHYSIOLOGY.

BY H. P. BOWDITCH, M. D.

FUNCTIONS OF THE CORTEX CEREBRI.

Investigations by Local Irritation. — In the report for July, 1873, an account was given of the then recent experiments of Hitzig, Ferrier, and others, showing that certain groups of muscles could be brought into activity by the irritation of definite points on the surface of the cerebral lobes. Since that time the subject has occupied the attention of numerous investigators, who all admit the existence of "active spots" (as Burdon-Sanderson calls them) in the cortex cerebri, but differ widely in their views of the mechanism by which the irritation of these spots gives rise to muscular movement. Three possible explanations of the phenomenon may be given : (1.) The movement is caused

by the irritation, not of the part to which the electrodes are applied, but of some deeper-seated portion, in consequence of the spreading of the electric current through the cerebral substance. (2.) The "active spots" are nerve centres, *i. e.*, collections of ganglion cells, presiding over the groups of muscles which are brought into activity by their irritation. (3.) The "active spots" are not themselves nerve centres, but stand in nervous connection with the deeper-seated centres of definite groups of muscles. The movements in question are therefore of a reflex nature.

The first of these propositions has been maintained by Dupuy[1] and by Carville and Duret.[2] These authors, however, only showed that it is possible to irritate remote parts of the brain by electrodes applied on the surface, not that it is impossible to produce muscular movements by an irritation of the cortex under conditions which preclude the possibility of any but local action. That local irritation of the cortex may really produce the movements in question has been shown by Braun[3] in a series of experiments consisting in dividing with a sharp knife the connections between an "active spot" and the subjacent tissues. After this operation, which would not be likely to prevent the spreading of electrical currents to the deeper tissues of the brain, irritation of the "active spot" was found to be without effect even when the intensity of the current was made much greater than that which, before the operation, was sufficient to produce definite movements. A similar investigation made entirely independently by Dr. J. J. Putnam[4] led to the same result, except that after section of the subjacent tissues it was found necessary to increase *only slightly* the intensity of the current applied to the cortex in order to produce the same muscular movements as before. Carville and Duret deny that these experiments prove what their authors intended to show, for they maintain that the blood effused when the tissues under the "active spots" are divided is a so much better conductor of electricity than the brain substance that the currents no longer penetrate into the deeper tissues unless they are made more intense. How far this objection is valid can be determined only by careful investigations directed to this special object. It is proper to mention, however, that Carville and Duret, influenced by other considerations, have admitted in a recent work[5] that electrical irritation of the cortex "has a certain local action, and that the result of this action varies with the points of application of the electrodes."

The observations of Hermann[6] (that destruction of the "active spots" by drying or by nitric or acetic acid does not prevent the irrita-

[1] Examen de quelques Points de la Physiologie du Cerveau. Paris. 1873.
[2] Gazette médicale de Paris, January 10, 1874.
[3] Eckhard's Beiträge zur Anatomie und Physiologie, vii. 127.
[4] The Journal, xci. 49.
[5] Archives de Physiologie, 1875, vii. 409.
[6] Pflüger's Archiv, x. 77.

tion from producing the usual effects, and that after mechanical removal of the "active spots" irritation of the underlying brain substance still calls forth the same movements) do not of course disprove the existence of excitable nerve tissue in the cortex, but only show that the tissue under the "active spots" is also excitable. In view of the above-mentioned positive results obtained by Braun and Putnam the negative results of Hermann's experiments are of little importance.

The excitability of definite spots in the cortex being therefore regarded as well established, it remains to inquire whether the movements in question are due to a direct irritation of *centres in the gray substance* or are reflex phenomena taking place through *deeper-seated centres*, the excitable nerve tissue of the cortex (whether nerve-cells or nerve fibres) acting in this case in the same way as the terminations of peripheric nerves in an ordinary reflex action.

To appreciate the force of arguments bearing upon this point it is necessary for us to consider what information we can obtain from other sources in regard to the mechanism by which the cerebral centres are brought into connection with the motor nerves. The fact that the cervical cord contains fewer nerve fibres than the spinal nerve roots shows that the brain cannot have a direct connection with every muscular fibre, and our inability to innervate an isolated muscular fibre, or even a single muscle (except with difficulty and after much practice), is quite in accordance with this anatomical observation. Moreover, the occurrence of purposive reflex movements in animals whose cervical cord has been divided, and their apparent identity, as far as muscular mechanism is concerned, with voluntary movements, have led to the hypothesis that the cord is the seat of so-called "coördinating centres" presiding over *groups* of muscles, and that these centres may be brought into activity either by an impulse coming from without through an efferent nerve, in which case the movement is reflex, or by an impulse coming from above, for example, from a centre of volition, in which case the movement is voluntary. By an extension of the same hypothesis higher, "coördinating centres" presiding over more complicated muscular movements, for example, those of walking, have been assumed to exist in the ganglionic masses at the base of the brain.[1] It will thus be seen that, while it is very easy to decide whether a movement called forth by the irritation of a nerve trunk is direct or reflex in its character, the decision is much more difficult when the movement is the result of irritation of the cortex cerebri. For in the former case, apart from the help afforded by a knowledge of the anatomical distribution of the nerve, the character of the movement (*i. e.*, whether tetanic purposive, etc.) and the time required for its accomplishment are usually conclusive in regard to the matter. In the latter case, however, not

[1] See Report on Pathology of Cortex Cerebri, in the Journal, xci. 111.

only does anatomy afford us little or no assistance, but, if the above-mentioned theory of nervous mechanism is correct, we cannot expect that a direct will differ materially from a reflex movement, either in character or in the time necessary for its performance. This will be evident when we consider that in both cases the impulse must be transmitted through coördinating centres which bring whole groups of muscles into action, and that it is in these centres that the delay in transmission occurs which is commonly regarded as characteristic of reflex phenomena.

The above considerations are sufficient to invalidate many of the arguments which have been brought forward to prove the reflex nature of the movements in question. Thus it has been urged by Schiff[1] that these movements are reflex because they are stopped by complete narcosis, because no tetanus is produced by a rapidly interrupted induced current, and because the time elapsing between the beginning of the irritation and the production of the movement is from seven to eleven times greater than it should be if the impulse were directly transmitted, with the normal rapidity of nerve force, from the point irritated to the muscles. On the other hand, it has been shown by Gliky[2] that the movements in question cannot, like various well-known reflex actions, be inhibited by a powerful irritation of a peripheric nerve. This writer is therefore inclined to deny to nerve centres all participation in the production of these movements, though he admits that the experiments are not decisive.

In the imperfect state of our knowledge of the conditions affecting the activity of the cerebral centres it is difficult to devise conclusive experiments, but in their absence it is interesting to notice such observations as those of Lander[3] on the brain of an idiotic boy fifteen years of age, who had had an attack of infantile spinal paralysis at three years of age and since that time had suffered from paralysis of the muscles of the trunk and neck, especially on the right side. In this brain a decided atrophy was noticed in those convolutions which, according to the observations of Betz[4] on the ganglion cells of the cortex, are to be regarded as analogous to the motor regions of the gray substance demonstrated in experiments on animals. It was noted also that the atrophy was more marked on the left side than on the right. In this connection are also to be mentioned the observations of Soltmann,[5] who found that irritation of the cortex cerebri of puppies less than nine or ten days old produced no muscular movements, and that the "active spots" on the brains of young animals differ in size and shape from those of adults.

[1] Archiv für experimentale Pathologie, 1874, iii. 171.
[2] Eckhard's Beiträge, vii. 179.
[3] Centralblatt für die medicinischen Wissenschaften, 1875, page 225.
[4] Centralblatt für die medicinischen Wissenschaften, 1874, page 596.
[5] Centralblatt für die medicinischen Wissenschaften, 1875, page 209.

Whatever view, therefore, may be taken of the mechanism by which irritation of the cortex gives rise to muscular movements, it seems evident from these two observations that the "active spots" are regions of the cortex *whose development is connected with the power of causing contraction in certain sets of muscles.*

Not only do groups of striped muscles seem to be thus functionally connected with definite regions of the cortex cerebri, but there is also reason to believe that a similar relation exists for the heart, the blood-vessels, the spleen, the intestines, and the salivary glands. Thus it has been found by Lépine[1] that irritation, with feeble induced currents, of the post-frontal convolution of a curarized dog causes a rise of blood-tension in the crural artery of some seven centimetres of mercury. This is accompanied by an increased rapidity of the heart-beats, but if the irritation is very strong and the vagi intact, a diminution in the rate of the heart-beats results. If the irritation is applied to a spot which on an uncurarized dog would cause movements of one of the opposite feet, the temperature of this foot rises several tenths of a degree. The temperature of the foot on the same side rises also, but to a less degree, while that of the rectum remains stationary. Lépine also discovered certain spots whose irritation caused an increased secretion of saliva. Bochefontaine,[2] operating in a similar way, found four different spots on the surface of the brain whose irritation caused contraction of the spleen, and six spots from which movements of the intestines could be produced.

A much more decided rise of temperature in the limbs than that noticed by Lépine was observed by Eulenberg and Landois[3] as the result of the application of the actual cautery to the cortex on the opposite side. They regarded this result, however, as due to the destruction, not to the irritation of the parts in question, for they were able by electrical irritation of the same parts to obtain a slight and transient diminution of temperature in the limbs. This question will be considered in the second portion of this report.

(To be concluded.)

AN INTRODUCTION TO PATHOLOGY AND MORBID ANATOMY.[4]

The reader of this book should bear in mind that it is offered as an introduction to the subjects of which it treats. It is not, therefore, to be regarded as containing a complete statement of the points to which it refers, nor indeed

[1] Gazette médicale, 1875, No. 25.

[2] Gazette médicale, 1875, No. 52.

[3] Centralblatt für die medicinischen Wissenschaften, 1876, page 260.

[4] *An Introduction to Pathology and Morbid Anatomy.* By T. Henry Green, M. D. Lond. Second American, from the third revised and enlarged English edition. Illustrated. Philadelphia: Henry C. Lea. 1876.

as giving anything more than the impressions of the writer concerning the matter he chooses to present. At the same time it must be admitted that a judicious selection has been made, and that the more important problems in pathology and pathological anatomy are brought forward in a way which is likely to attract and often to fix the attention. Herein lies the strength and at the same time the weakness of the book. The author's mind is apparently of that character which retains the positive, mainly; doubts are either not admitted or are set aside without allowing the reader to suspect their existence. The style is clear and forcible, the sentences short and pithy, the statements dogmatic and categorical. But little is probable, while certainty is everywhere prominent.

In speaking of post-mortem rigidity it is stated that the more healthy and vigorous the muscles are, the longer is it before rigidity takes place. This statement omits entirely the consideration of those interesting cases of sudden death, as on the battle-field from gunshot wounds, when the position of the body and limbs remains the same as at the moment of death. The obliteration of the ductus arteriosus and umbilical vessels after birth can hardly be regarded as apt examples of atrophy from diminished functional activity. It might be considered much more appropriate that mention of them should rather be made in connection with thrombosis, or the inflammation of vessels.

The distinction between infiltrations and metamorphoses is very sharply drawn, in the former a matter from the blood being deposited in the tissues. With regard to amyloid infiltrations this process is by no means so accurately made out as to be thus absolutely stated. In the description of the mucoid and colloid degenerations, too much stress seems to be laid upon the seat of the change; in the intercellular substance in the former, in the cells in the latter. The corpora amylacea are identified under circumstances with brain sand, the corpora arenacea, at least we find no mention of the latter except in this relation. In the description of the intercellular substance of the sarcomata it is stated that the same may be perfectly fluid and homogeneous. Without some qualification or explanation the reader would be justified in inferring that a fluid rich in cells might be spoken of as a sarcoma.

The physician who likes to know something of what has been done will undoubtedly be interested in this volume. He who wants to learn what there is to do will neither receive the incitement to nor an idea of the necessary training which must first be gone through with.

The book contains numerous wood-cuts, original and borrowed, most of them exceedingly good and very suggestive to those familiar with histological work. The name of the publisher is a sufficient guaranty that the general appearance is a creditable one. R. H. F.

REPORT FOR WORCESTER DISTRICT.[1]

ALBERT WOOD, M. D., REPORTER.

WESLEY DAVIS, M. D., of Worcester, reports two cases of rupture of the bladder: —

CASE I. I was called at five A. M., June 29, 1875, to attend a well-developed Irish laborer, thirty years of age, who, while in an intoxicated condition the afternoon before, had fallen over a chair in attempting to dance. He was taken up and carried to his home, where he arrived at 6.30 P. M., not complaining of any particular pain, though he vomited soon, and several times during the night. Upon my arrival I found there were slight abrasions upon the forehead and nose, and no other visible injury. He was very restless, suffering severely from pain in the abdomen, referred especially to the epigastrium, with some nausea. Gave morphine hypodermically, and ordered powders of the same, to be used as needed to control pain. During the forenoon restlessness continued, he could not be induced to remain in bed, and was making frequent efforts to urinate, which he had not done since the injury.

Saw the patient with Dr. Sargent during the afternoon, and upon introducing a catheter, drew off about a pint of bloody urine containing a considerable quantity of clotted blood. Bowels were tender upon pressure; in other respects his condition was similar to the last report. We repeated the morphine hypodermically, and ordered opiates *pro re natâ*.

June 30th. He was much the same, only weaker, and the bowels were more tender and tympanitic; the nausea and inability to urinate continued. Drew a little bloody urine, but made no change in treatment. He died July 1st, rather less than three days from the time of injury.

Autopsy, twenty-four hours after death, in presence of Drs. Sargent and Rice. Abdomen was much distended. Lungs, heart, liver, and kidneys healthy. Membranes of brain slightly congested. The abdominal cavity contained from two to three quarts of bloody fluid. Intestines were distended with flatus, and in many places adherent from the recent peritonitis. The bladder was found ruptured to the extent of two inches antero-posteriorly, extending through the fundus and anteriorly, with clean-cut edges, looking almost as though done with a sharp-cutting instrument, and it had the appearance of having been in a perfectly healthy condition prior to the accident. There were no marks of violence to be detected, either externally or in the parietes of the abdomen.

CASE II. A case very similar to the above occurred here a few weeks previously, the particulars of which are obtained from the report of the autopsy and evidence given at the coroner's inquest, the patient having been under the care of an irregular practitioner.

The 11th of May the deceased received an injury, the circumstances connected with which he refused to disclose. There was a severe cut upon the forehead, which was closed by two sutures, and there was also a "black eye." He was soon troubled with nausea and pain in the abdomen, most severe in the hypogastrium and right hypochondrium. There was great restlessness,

[1] Concluded from page 46.

soon followed by sensitiveness upon pressure. He was unable to urinate after the injury, and about a pint of bloody urine was drawn the following day. The tenderness increased, nausea and restlessness continued, tympanites developed, and, failing rapidly, he died on the 14th, three days from the time of injury.

Autopsy, forty hours after death, by Dr. Henry Clarke, Drs. Rice and Wood being present. There was discoloration of the right groin and of the left groin and thigh. The abdomen was much distended, and contained (by estimation) two quarts of bloody fluid and some small clots in the folds of the intestines and omentum, which were quitee xtensively ecchymosed, the former showing some slight recent adhesions. Upon raising the bowels so as to look into the pelvis, a rupture of the bladder at the fundus was disclosed, looking as though a piece two inches in diameter had been cut out, leaving ragged edges. There was also a rent in the peritoneum, extending two inches laterally from the edge of the opening in the fundus. The abdominal parietes over the bladder were bruised and discolored. The neck of the bladder and prostate were in a normal condition, as were also the heart and lungs.

In each of the above cases there were suspicions of foul play, and consequently an inquest was held in each, but without eliciting any facts to warrant the suspicions.

C. A. Peabody, M. D., of Worcester, reports a case of fracture of the skull: —

A man about thirty years of age, while riding home intoxicated, was thrown from his wagon, receiving a bad fracture of the skull. The fracture was nearly over and in the direction of the coronal suture on the right side, and was three inches long by one inch and a half wide, compound and comminuted. The fragments of bone were driven an inch and a half within the cranium, lacerating the membranes and causing the loss of considerable of the brain-substance.

To dress the wound it was necessary to administer ether, but the patient was not fully conscious, and for several days afterwards had mild delirium. The wound was cleaned and its edges brought together with several sutures, a cold compress applied, and cochia pill ordered, to be repeated every four hours if necessary. On the second day quite a quantity of pus and broken-down brain-substance escaped from the wound, and there was beginning paralysis of the left arm. For the next few days delirium became more marked, though not at any time violent, but the patient was very restless and excitable. The face was much swollen, the tongue and teeth were covered with sordes, the pulse was quick and feeble, and the prognosis decidedly unfavorable. The discharge from the wound was healthy pus, considerable in quantity. The patient became more and more restless, refusing to take anything given as medicine, but drank a good deal of milk. Chloral was now administered, in milk, in twenty-grain doses every three hours. Only two doses were necessary to induce sound sleep.

From this time delirium vanished and the patient began to improve; the swelling disappeared from the face, and the appetite and sleep became good.

There had been for several days some protrusion of the brain at the wound, but this was overcome, and perfect union of the wound resulted. When he left the hospital, twenty-four days after admission, there was some paralysis of the opposite arm remaining, but otherwise his recovery seemed to be nearly perfect.

Dr. Peabody also reports a case of subluxation of the atlas: —

A brakeman, while "wooding up" an engine, was seized with vertigo and fell from the woodpile to the ground, a distance of about four feet, striking on his head. He was at once picked up unconscious and removed to the City Hospital.

On admission he was found to be entirely unconscious, and could not be roused, though he moved all his limbs freely; there was some vomiting; the eyes were closed, pupils moderately dilated; pulse and breathing were accelerated; efforts to make him swallow were ineffectual. There was a small scalp wound over the occipital protuberance, but no evident fracture of the skull. At the back of the neck immediately below the skull, from which it was separated by a narrow depression, was a prominence of the size of a filbert. The head was movable in every direction, but when thrown forward most alarming symptoms were produced: the pulse and respiration almost ceased, the face became blanched, and the pupils at once contracted, dilating again, however, with the returning pulse, respiration, and color, when the head was carried back again.

Soon after this manipulation a severe vomiting fit came on, immediately after which the patient opened his eyes, recognized and spoke to a person standing near, and complained that his neck felt sore. The prominence at the back of the neck was now no longer to be found.

The patient soon got up and walked about, and the next morning was discharged, well.

George J. Bull, M. D., of Worcester, reports a case of spina bifida: —

A child was born recently under my care having a spina bifida tumor in the lumbar region, communicating directly with the spinal canal, and having its transparent coverings formed of the spinal meninges. On the second day we punctured the sac, which soon afterward collapsed, and was then lightly compressed. Nervous symptoms followed, and on the third day convulsions. Paralysis of the lower extremities gradually became complete; the bladder and sphincter ani were also paralyzed; the fingers and toes were always rigidly flexed; hydrocephalus slowly manifested itself; thrush appeared as a distressing complication; emaciation steadily progressed, and the child died of asthenia at the age of two months.

While the case went on thus unfavorably, the sac passed through a series of changes, including superficial inflammation and sloughing, in which its coverings became contracted, opaque, and dense, its contents disappeared, and at last we had a hardly noticeable protrusion covered by strong skin in place of the transparent tumor.

In consequence of paralysis of the bladder I had to draw off the urine fre-

quently, using a No. 1 gum-elastic catheter, the child being a female. On the first occasion of its use, at the close of the fourth day, urine had not been passed for over twenty-four hours, the abdomen was tense and prominent, and dull on percussion as high as the umbilicus, and I obtained twenty-two drachms of high-colored, acid urine containing albumen and granular and hyaline casts, together with epithelium from the kidney and bladder, and some mucus. The urine of the fifth day contained albumen, but was not examined for casts. That of the sixth day had less albumen, but under the microscope showed several casts and some granular *débris*. Subsequent examinations gave no evidence of casts; the albumen gradually disappeared until, after the ninth day, none could be discovered. In looking for the cause of the occurrence of these abnormal constituents of the urine the question naturally arises, Are renal casts and albumen usually present in the urine of the first days of infantile life? That they are not so present would appear from the observations of MM. Parrot and Robin, detailed in their paper[1] On the Normal Urine of New-Born Infants, presented to the Académie des Sciences, for they state that under no circumstances does the normal urine of the fœtus or the new-born child contain albumen. During the first two days on which the catheter was used, the urine contained mucus and had a specific gravity of 1015; afterwards the specific gravity was from 1004 to 1008. The urine was always acid, sometimes deposited oxalate of lime and sometimes a gravel of uric acid, in consequence, doubtless, of the wasting of tissue and the very small supply of nourishment the babe was able to take. At the time I was catheterizing this infant I took abdominal palpation and percussion as my guides in determining when to use the instrument; but it is well to know that the new-born infant secretes more urine in proportion than the adult. Parrot and Robin state that "a new-born infant passes four times more urine than an adult per kilogramme of its weight." In this case the amount of liquid ingesta was much less than that ordinarily consumed by healthy infants; it is, therefore, probable that the quantity of urine secreted was less than normal. In the following table I have recorded accurately the number of drachms of urine which entered the bladder in a known number of hours:—

Age of Child.	Time of Day.	Number of Hours.	Drachms of Urine.	Sp. Gr.
4 days.	From 8.30 P.M. to 2 P.M.	17½	16	1015
5 "	" 2 P.M. to 8.30 P.M.	6½	8	1015
6 "	" 8.30 P.M. to 10 A.M.	13½	11	1008
6 "	" 10 A.M. to 5 P.M.	7	12½	1008
6 "	" 5 P.M. to 9 P.M.	4	6	—
9 "	" 5.30 P.M. to 2.30 A.M.	9	15	1008
10 "	" 2.30 A.M. to 11 A.M.	8½	10½	1008
10 "	" 11 A.M. to 6 P.M.	7	12	1007
11 "	" 9.15 A.M. to 6 P.M.	9	18	1007
11 "	" 6 P.M. to 12.30 A.M.	6½	12	—
12 "	" 12.30 A.M. to 9.30 A.M.	9	8½	—
12 "	" 9.30 A.M. to 3.15 P.M.	5¾	8	1008
12 "	" 3.15 P.M. to 9 P.M.	5¾	4	—
13 "	" 9 P.M. to 9 A.M.	12	10	1008
13 "	" 9 A.M. to 3 P.M.	6	6	—
		127	157½	

[1] Gazette hebdomadaire, January 14, and Medical Times and Gazette, January 22, 1876.

This shows an average secretion of one drachm and a quarter per hour, or thirty drachms per day; that is, about three times as large an amount in proportion to the weight of the body as is secreted by the adult. The infant bladder is probably not larger in proportion than that of the adult; therefore when it is paralyzed we should remember the large secretion of urine in the early days of life, and use the catheter more frequently. In this case I used it about four times in the twenty-four hours.

Albert Wood, M. D., reports two cases where quinine was used for after-pains: —

Case I. Mrs. H., aged thirty-two, mother of six children. Had always been a hard-working, ambitious woman. She had been under treatment for some months for retroflexion of the uterus, with a good deal of vesical disturbance. Had had retention of urine several times. She became pregnant, and was more or less uncomfortable most of the time, until the beginning of the seventh month, when she had what appeared to be threatened miscarriage. The uterus would contract every two or three minutes, and she would appear to be in the most intense agony. There was no show and no dilatation of the os. Large doses of chloral and of opium and a variety of other anodynes had no effect whatever to relieve the pain. It was only after putting her thoroughly under ether that the pains were stopped. As soon as she came out of the ether the pains returned, and were again controlled by ether twice. I should have said that, as far as I could judge, her bowels were in a healthy state.

She remained quiet for about ten days, when she had a similar attack. After trying one large dose of chloral, and morphia subcutaneously, I put her immediately under ether, with relief at once. In less than two weeks she had another similar attack under the care of another physician, of large experience. He met with similar success to mine in trying to relieve the pain, and was obliged to resort to ether. At the beginning of the eighth month labor came on, and she was delivered of a living child. The next day she began to have the same excruciating pains as before confinement. I decided to try sulphate of quinine. I gave her ten grains in the morning, with ten grains to be repeated in six hours if needed. The first dose mitigated the pains, which were entirely relieved by the second.

Within a year she again became pregnant, and at the end of the fifth month commenced in the same way as during her previous pregnancy. I gave her twenty grains of quinine, at one dose, without any relief, and was obliged to resort to ether again. After having two of these attacks she was delivered, at the end of the sixth month, of a dead child. The same excruciating after-pains appeared, which were instantly relieved by twenty grains of sulphate of quinine.

Case II. Mrs. C., the mother of eleven living children. The last three labors have been under my care. The first time I attended her she told me that she suffered terribly from after-pains, so I instructed the nurse how to keep the womb well contracted, and gave a very large opiate, which was repeated, and repeated with chloral, with no marked relief, for several days. At the next confinement I thought I would give her a large dose of ergot with opium, to

see if that would not prevent the pains. It did not succeed any better than my attempts the first time. The third time, I decided to give her immediately after confinement fifteen grains of sulphate of quinine, with the result, she said, of her having only one or two slight pains.

Dr. Wood also reports a case of poisoning by acetate of morphia, with recovery: —

Recently I was called, at eleven o'clock A. M., to attend a patient full half a mile distant, who was said to be very ill. On arriving at the house I found a large, well-built man, forty years old, who had been trying to kill himself with morphine. His face was livid, pupils contracted to a point, respiration two in a minute, pulse 60. He could be roused with much difficulty, but soon fell back into a deep stupor. I hastily learned from his mother the following history: There had been some "unpleasantness" between him and his wife, and they had not lived together for some time; he was also very much depressed because he could not obtain work; he had come home from Springfield the night before, chatted with his father and mother, also with his wife and children, and about ten o'clock retired to bed, in a room by himself. Not coming down to breakfast, at 7½ A. M. his boy, aged ten years, went to call him, and found him asleep, but roused him with much difficulty. A physician was not sent for until 10½ o'clock. I immediately administered, with much difficulty, thirty grains of sulphate of copper, and ordered large draughts of mustard-water. Returning in fifteen minutes with Dr. Martin, and finding that all efforts to make him vomit failed, the stomach was thoroughly washed out. He was breathing three times in two minutes, and his face was very livid. One thirtieth of a grain of sulphate of atropia was given subcutaneously, and Dr. Martin applied a slipper vigorously to all parts of the body. The pulse began to quicken; respiration remained the same, also stupor. The atropia was repeated every half or three quarters of an hour for five doses. Respiration increased to three in a minute; pulse 140; skin very red; pupils slightly dilated; able to arouse him so as to make him take a small quantity of strong coffee.

Stupor again increased. Respiration fell to two in three minutes. Sent for Dr. Francis, who applied the battery. The respiration in course of thirty minutes quickened to one in a minute, then slowly increased; at twelve o'clock at night it was six in a minute. Had been able to walk him about, supported by two men, for three hours. At one o'clock, respiration eight and pulse 120. Skin very red; had not perspired at all. At four o'clock he woke up very suddenly, after having been allowed to sleep for a short time, saying he was all right, but instantly fell asleep. Allowed to sleep, to be occasionally aroused. The next day he told me this story, which I have no reason to disbelieve. He went into a drug store in Springfield and bought two bottles of morphine; then he decided he would not take but one. In the cars, on his way home, he tore off the paper from the bottle, also the tin-foil or cap, opened the bottle, and tasted merely of the morphia. On going to bed that night, not knowing the amount necessary to kill himself, he took a piece the size of a large pea. He slept all night, and did not wake up until aroused

by his son. Finding he was not dead, he took all that remained in the bottle, while his son had gone down-stairs to call his mother. He tried for a long tim to prevent his mother's sending for a physician. The empty bottle was on the table by his bed. The bottle was one of Power and Wightman's.

Allowing the man's statements to be true, he must have taken nearly a full drachm at about 7½ o'clock in the morning, and nothing was done to relieve him until four hours afterwards.

This case shows the effects of atropia to quicken the respiration. But after giving five doses of one thirtieth of a grain, as the respiration again fell, it was thought advisable to use the battery. Was the peculiar redness the result of the sulphate of atropia or of the severe slapping he received? Also, did the sulphate of atropia prevent the copious sweating which usually occurs in opium poisoning? I should have stated that the patient never had been an opium eater.

THE TREATMENT OF SUNSTROKE.

The intense heat with which the country has been pretty generally visited this season has not been without its effect upon the health of the community. According to recent accounts the rate of infant mortality has been higher in the city of New York than has been known for a long period of time. The number of cases of sunstroke in this part of the country will also doubtless at the end of the season be found to be greatly in excess of that of former years. The daily papers already contain numerous accounts of individuals who have succumbed to this malady. The dangerous character of this disease, the varied opinions regarding its true nature, and the fact that most practitioners have but vague and unsettled views as to the true method of treatment render the subject in question of more than usual interest at the present time. Without attempting to give even a hasty glance at the literature of this disease, or to discuss its pathology, we could call the attention of those of our readers who are not already familiar with it to the interesting little monograph by Dr. H. C. Wood, Jr., a Boylston prize essay, published a few years since. There can be no doubt, as Dr. Wood states, that many cases of sudden severe illness have been grouped under the name of sunstroke. Prominent among these is simple exhaustion due to excessive labor in a heated atmosphere, a very different affection from true sunstroke, and characterized by symptoms sufficiently pronounced to enable a careful practitioner to recognize it without difficulty. True sunstroke, according to Dr. Wood, resembles in its nature a fever, a fever not dependent upon blood-poisoning but upon heat, an ephemeral or irritative fever. Thermic fever is the name which he accordingly applies to this disease. Taking this view of the case, and rejecting the term apoplexy, which is frequently employed by writers, a more rational method of treatment at once suggests itself. The prominent symptoms — a very hot and dry skin, with excessively high temperature as shown by the thermometer — would seem to give a clew to the remedies which are to be employed with some hope of success. The antipyretic treatment, which has so many able and energetic advocates for its efficacy in controlling fever, has here a fair field for the test of its virtues. The cold bath,

for instance, might be substituted for the ruder methods of applications of ice to the head or cold douches. The subcutaneous injection of quinine, as recommended by Surgeon Hall in *The Practitioner* for March, appears to have produced marvelous results in a case described by him. The cold douche had been employed and ice applied to the nape of the neck without effect; the heart's action was rapidly failing. Stimulants could be administered only with great difficulty, and the case was becoming desperate when quinine was administered subcutaneously. An improvement of the symptoms encouraged a further trial, and the patient made a rapid recovery. About five grains only were administered in this case. For those of our readers who have not employed quinine in this way we would state that one drop of dilute sulphuric acid and ten minims of water are necessary for the solution of one grain of quinine. The ordinary subcutaneous syringe could thus hold three grains of quinine.

Probably other remedies having a similar action, as salicylic acid, may be found to be useful, although this latter drug could not be administered with the same facility.

We point to this line of treatment as one which has not yet been thoroughly tested, and hope that those who come in contact with the disease this season will see fit to publish their experience.

MEDICAL NOTES.

— Dr. John Jeffries died at his residence on Chestnut Street on Sunday last in the eighty-first year of his age.

— William S. Dennett, M. D., has been appointed ophthalmic surgeon to the Boston Dispensary.

The Medical Register of Massachusetts is to be enlarged to include the New England States. It is to appear shortly, edited by Dr. F. H. Brown and published by H. O. Houghton & Co.

— The *Medical Times and Gazette* reports that at the London Hospital Mr. Maunder recently removed from the left bronchus of a boy, aged thirteen, a smooth oval piece of glass an inch long and forming a part of a sleeve link. It had been in the trachea eighteen days without symptoms, and about thirty hours before operation had fallen into the left bronchus. Tracheotomy was performed, the patient was inverted and shaken, but with no avail. A loop of stout silver wire was then passed six or seven inches through the wound downwards, and to the left; on the wire being withdrawn, the foreign body came with it. The patient is well.

— The *Medical Times and Gazette* of June 24, 1876, reports a terrible outbreak of cholera at Golwood, in India, a village of two hundred people on the Bombay and Baroda Railway. Over half the population died in three days. The disease appeared at noon on the 4th of June, and before daybreak the next morning there had been fifty-seven deaths. On the 8th all the survivors fled, but were refused admission by the adjacent villages. The disease displayed extreme virulence, some cases proving fatal in twenty minutes. In

these cases the ordinary cholera symptoms were absent, and the body at the first stroke of the disease became livid, convulsed, and shrunken. Medical help was some time in reaching them, there being no resident doctor in the town. Gross neglect of sanitary measures is stated to be the apparent cause, the people living in inconceivable filth. Cholera appears to be unusually prevalent in India this year, outbreaks being reported from various quarters, none, however, approaching that of Golwood in violence.

— Birmingham, England, is fortunate in the possession of a bountiful benefactress in the person of a Miss Ryland. Some time ago this lady presented to the city Cannon Hill Park, comprising some sixty acres of undulating and well-timbered land, estimated to be worth £70,000. Recently the town council desired to purchase of her forty-two acres of land situated in another part of the city. Miss Ryland refused to sell, but has given the estate to the town for a term of five hundred years, at an inconsiderable rent. The estate, says the *Medical Times and Gazette*, which is beautifully wooded, is situated two and a half miles from the centre of the town, in a quarter where the artisan class predominates. The intrinsic value of the gift is estimated at not less than £30,000.

— We cull from the *Medical Times and Gazette* the following, taken from the *Revue Thérapeutique*, in regard to the leech as a weather prophet: "An 'Old Practitioner' writes, 'I have always on my window-sill a leech in a bottle three parts filled with about a pound of water, which is changed every week in summer and every fortnight in winter. The mouth of the bottle is covered with a piece of coarse cloth. If the leech remains at the bottom of the bottle, motionless and curled on itself like a snail, there will be fine, durable, clear weather; but if it rises into the neck there will be snow or rain as long as it remains there. When it is going to be very windy the leech swims very rapidly from one side to the other, only becoming quiet on the appearance of the wind. Some days before a violent storm with rain and tempest it almost remains out of the water, and exhibits movements resembling those of a convulsive paroxysm.'"

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. CHARLES B. PORTER.

[REPORTED BY G. H. TILDEN.]

Large Housemaid's Knee; Excision; Rapid Recovery. — August 21, 1875. While moving a cask some ten years ago, C. M., a healthy man, then forty years of age, received a severe blow upon his right patella. Soon afterwards a small swelling made its appearance at the seat of injury, which for eight years grew slowly, but during the past two years has more rapidly increased in size. He now has over his right knee a tumor six inches long, five inches broad, and three and one half inches deep, resembling somewhat in shape a stumpy cucumber, its long axis being parallel to the long axis of the limb. The growth is movable, and to the feel is tense and elastic. The skin over it is smooth and glossy from stretching, and is traversed by several superficial veins. The tumor gives a sense of fluctuation, but is not translucent. There is no

pain, only inconvenience from the size and situation of the tumor. The knee-joint is perfectly sound and retains almost its normal extent of movement.

August 25th. The patient being etherized, the sac of the tumor was dissected out entire through two curved incisions, about five inches each in length, which included an elliptical shaped piece of skin on the top of the swelling. The sac was very adherent to the patella. There was but little hæmorrhage, only three ligatures being required. The flaps were brought together by numerous sutures, a hole being made in the most dependent part of the outer flap, to insure drainage and for the passage of the ligatures. The leg was placed on a well-padded ham-splint, and compression was applied over the knee by means of cotton-batting bandaged on. This was the only dressing.

The patient had hardly any pain or constitutional disturbance, so the wound was not exposed till the 27th. It was looking finely, there being not a particle of inflammation. A narrow strip of simple cerate was applied to the line of incision, and the cotton-batting was reapplied.

On the 28th, one half the stitches (every other one) were removed and their places supplied by narrow strips of adhesive plaster.

All the remaining stitches were removed on the 29th, the wound looking as well as possible. The ligatures all came away by October 30th, and the patient was practically well. The line of incision had joined perfectly by first intention, there having been not a drop of pus formed since the operation. There only remained a small granulating spot, the size of a nickel five-cent piece, which corresponded to the opening which had been made in the outer flap. This rapidly healed. At no time was there anything like effusion into or trouble with the knee-joint, but for prudence' sake the patient was kept quiet in bed till September 8th, when he was allowed to get up. He was discharged, well, September 10th.

Typical Abscess of Head of Tibia; Trephining; Recovery. — October 2, 1875. About five months before entrance, J. W., fifteen years of age, was kicked by a cow on the right leg, just below the knee. A month afterwards he began to suffer from pain in the inner and anterior portion of the same leg, just below the knee. The pain was aggravated at night and by use of the limb, and its locality was marked by swelling and tenderness. The pain and the swelling and tenderness were synchronously intermittent, appearing and then disappearing at varying intervals of time. On entrance he was able to walk, but had in a spot which overlay the inner tuberosity of the right tibia a circumscribed circular swelling, about the size of a large watch crystal, and but slightly elevated above the surrounding skin. This spot was tender on pressure, slightly reddened, and œdematous. The knee-joint was normal in size and contour, being apparently uninvolved. The leg was placed on a ham-splint, and a blister was applied to the locality of pain and swelling. For a little over two weeks nothing was done more than keeping the patient in bed with the leg on a splint. One or two blisters were applied. The pain increased gradually, with exacerbations and remissions. The circumscribed swelling and tenderness increased with the pain. Constitutional symptoms began soon to declare themselves, and the patient became feverish and had several marked but irregular chills. The pain finally became so severe as to amount to agony, espe-

cially at night, and subcutaneous injections of morphine were required to keep the patient in any sort of comfort.

Operation, October 21st. The patient was etherized and a crucial incision about two inches long each way was made through the swollen and œdematous tissues down to the tibia. The periosteum was thickened to one fourth of an inch, reddened and inflamed. The periosteum being scraped from the surface of the bone a button of bone, three fourths of an inch in diameter was drilled out of the head of the tibia by means of a trephine. On the removal of this button of bone, as much as three or four drachms of pure pus welled up through the opening and escaped. A sponge covered with a compress was stuffed into the wound to check oozing, and the leg was replaced on a ham-splint. In the afternoon the sponge was removed and the wound lightly dressed with carbolic acid and water, one part in sixty.

The next day the patient expressed himself as entirely relieved from pain. This perfect exemption from pain was permanent, and his febrile symptoms also rapidly diminished.

The splint was removed on the 24th, and the wound healed up slowly but steadily, the patient being discharged, well, December 22d.

Fracture of the Ribs; Complete Unilateral Emphysema; Delirium Tremens; Recovery. — September 8, 1875, H. E., a robust man, thirty-eight years of age, while walking on the track was struck on the right arm by the step of a locomotive and thrown some distance. He was brought to the hospital one hour after the occurrence of the accident, in a somewhat collapsed state. His most evident symptom was distress in breathing. There was marked emphysema of the right side of the back, extending from the top of the scapula to the false ribs and round toward the front over the right side of the chest. Pressure upon the ribs gave the patient severe pain, which was referred to the back just below the right scapula, and to the side of the chest just below the right axilla. The infiltration of the tissues with air, however, was so extensive that no crepitus due to fracture of the ribs could be felt. The great pain on inspiration caused the breathing to be rapid and superficial. There was no cough nor hæmoptysis. On the outer side of the right arm there was a small contused wound, where the blow from the locomotive had been received, and there was also a small lacerated scalp wound. Evidence of fracture of any other bones than the ribs was wanting, and the man was perfectly rational, there being no brain symptoms whatever.

The right side of the chest was encased in a jacket of overlapping strips of adhesive plaster, extending from the spine to the sternum and from the axilla to just below the last ribs. The wounds of the head and arm were dressed with simple carbolic acid and water dressing, one part to sixty.

Brandy was given, one ounce every four hours, besides milk and beef-tea at short intervals.

September 10th. Decided reaction has set in. Patient can lie only on the uninjured side, and his distress in breathing has increased. The emphysema has rapidly spread, and now reaches from the right temple, the eye being completely closed, down over the right cheek, the neck, shoulder, back, and flanks, into the penis and scrotum, which latter is as big as a good-sized cocoa-nut and almost as tense as a toy balloon.

September 11th. The emphysema is still spreading, and has gone into the abdominal walls as far as the middle line, and down over the nates, thigh, and leg as far as the ankle. The infiltration of the tissues with air was now at its maximum, and the patient presented a very curious, one sided, bloated appearance. There was hardly a spot on the right of the middle line of the body, with the exception of the arm, which did not give tympanitic resonance on percussion, and to the touch the characteristic crepitant feel of emphysema.

During the next two days the patient had a violent attack of delirium tremens, which only succumbed to the free use of potass. bromide and chloral hydrate. The emphysema began to diminish on the 12th, first departing from the penis and scrotum, and gradually leaving the extremities and then the trunk. With the exception of the attack of delirium tremens the patient's progress toward recovery was rapid and uniform, the emphysema and most of the dyspnœa having disappeared by the 16th. The patient was up and dressed by the 24th, and was discharged, well, October 4th, three weeks and five days from date of injury. The jacket of adhesive plaster was renewed as occasion required. At no time was there any cough or hæmoptysis.

LETTER FROM NEW YORK.

Messrs. Editors, — Within the past two weeks important changes that have given rise to considerable bad feeling have been made in the faculty of the University Medical College. In order to understand the affair better, it should be stated that the governing board of the faculty consists of the professors of anatomy, practice of medicine, physiology, materia medica, surgery, obstetrics, and chemistry. At a recent meeting of this board, from which the professors of anatomy and obstetrics were absent, one being out of town and the other sick, the following changes were made: The dissecting-room was taken away from Dr. Darling, Professor of Anatomy, and given to Dr. F. D. Weisse, who was appointed Professor of Practical and Surgical Anatomy. Dr. Darling has been connected with the college since 1851, and has been a member of the governing faculty since 1866. He has always had charge of the dissecting-room, and has spent much time in giving instruction to the students there.

Dr. J. W. Wright was appointed to deliver a course of lectures on obstetrics, thus placing him over Dr. W. R. Gillette, adjunct professor of obstetrics, who has acted as Dr. Budd's assistant since 1871, and for the past two years has done much of Dr. Budd's work with perfect satisfaction to all.

Dr. Erskine Mason, who entered the faculty in 1870 as adjunct professor of surgery, and was made professor of clinical surgery last year, has been virtually dropped from the list of instructors. He is deprived of all work in the college, and is simply asked to give clinical lectures in connection with his position as surgeon to Bellevue Hospital.

Some years ago a clinic for diseases of women was established, which was in charge of the late Dr. Kammerer, with Dr. Robert Watts as his assistant. At the time of his death, and until last fall, Dr. Watts had charge of the

clinic, but at the beginning of the winter course it was abolished on account of some feeling as to who should have charge of it, and Dr. Watts was made a lecturer on diseases of women, with the distinct understanding that if ever the clinic should be reëstablished he should have charge of it, in connection with Dr. Gillette, and now without any explanation it is reëstablished, and Dr. Pallen is placed in charge of it.

Immediately on the above changes being known, Professors Budd, Mason, and Gillette, and Dr. Watts sent in their resignations. Dr. Budd resigned because, in his absence and without his knowledge, the faculty had appointed a lecturer on obstetrics of whom he knew nothing, thus virtually displacing Dr. Gillette, who had worked with him for five years, and had given perfect satisfaction to himself and the students.

A year or more ago, on account of ill health, Dr. Budd wished to resign his position at the college, and it was only at the urgent solicitation of the faculty that he consented to remain.

Neither Dr. Mason, Dr. Gillette, nor Dr. Watts could continue his connection with the college with any self-respect in the face of this action of the board. The resignation of these gentlemen was unexpected to that portion of the governing board which has been instrumental in making the changes, and it leaves them in a rather unpleasant position. They can assign no reason for their action, since all these gentlemen were considered good instructors and were popular with the students. The college is not in a position to weaken itself, either by a change in its faculty or by bringing upon itself the discredit of unjustly treating those who have worked for its interest. Two of the gentlemen who have resigned, Dr. Mason and Dr. Budd, hold positions in Bellevue Hospital, and in their loss the school loses the use of their wards for the purposes of clinical instruction.

I understand that Dr. Wright will give the course of lectures next winter on obstetrics. He graduated in 1867, and has given a summer course of lectures on surgical dressings. Dr. R. A. Witthaus, a graduate of the class of 1875, has been appointed adjunct professor of physiology, and Dr. J. W. S. Gouley has been appointed professor of genito-urinary diseases. The virtual dismissal of Dr. Mason was made in the interest of Dr. Darley, professor of surgery, who wished full control of the instruction in surgery at the college.

Since writing the above I hear that Dr. Budd has consented to allow his name to be retained on the catalogue as emeritus professor of obstetrics. The college is reported to be greatly in debt, the new building is heavily mortgaged, and the old college building is still on their hands; they have been unable to sell it or to put it to any use. The university, in common with the other medical schools in New York, labors under the disadvantage of having its professorships unendowed. Perhaps this is a greater burden to the university than to the other colleges, as the building is owned to a great extent by a portion of the faculty. How far the financial question has been an element in bringing about the above-mentioned changes it is impossible to say. One thing is certain, that the faculty have not strengthened themselves, as far as the established reputation of the instructors is concerned, by the changes, if we except Dr. Gouley, who is an instructor and surgeon of recognized ability.

The *New York Medical Record* has been lately criticising the system of a short-term course in certain medical schools, for which it has been taken up by a writer in the *New York Times*, who seems to have come out of the discussion second-best. The writer in the *Times* labored under the mistake that the *Record* was working in the interest of the New York schools, and that the purpose of the writer was to bring into discredit all small medical colleges. The evident sensitiveness of the writer in the *Times* on this subject suggests the question whether an inquiry into the way of graduating students at some other colleges would show a strict compliance with the law in regard to the length of time devoted to study.

At a recent meeting of the board of government of the New York Hospital, Dr. Robert F. Weir was appointed one of the attending surgeons to the hospital, in the place of the late Dr. Krackowizer. Dr. Weir has had an extensive hospital experience; he was for ten years a surgeon to St. Luke's Hospital, and at present holds a similar position at the Roosevelt Hospital. The Floating Hospital of St. John's Guild has commenced its excursions for the season.

In a recent copy of the *New York Times* there appeared an account of a case of injury to the skull of a child, in which the operation of trephining had been performed. The doctor had given unusual facilities to the reporter for seeing the case and preparing the article, and the operator's name and address were not omitted from the published account. Is it not about time that this parading one's name in the papers was put a stop to?

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 8, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	858	42
Philadelphia	825,000	618	39
Brooklyn	506,223	382	39
Chicago	420,000	226	28
Boston	375,000	162	23
Providence	100,700	41	21
Worcester	50,000	19	20
Lowell	50,000	22	23
Cambridge	48,000	17	18
Fall River	45,000	37	43
Lawrence	35,000	25	37
Lynn	33,000	9	15
Springfield	31,000	9	15
Salem	26,000		

Normal Death-Rate, 17 per 1000.

THE BOYLSTON MEDICAL PRIZE COMMITTEE take pleasure in being permitted to announce that Francis H. Brown, M. D., of Boston, is the author of a dissertation on Civil Hospital Construction, which was honorably mentioned and recommended for publication, in their advertisement of the present year. R. M. HODGES, *Secretary*.

BOSTON, *July* 17, 1876.

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SOME POINTS IN THE PATHOLOGY AND TREATMENT OF CHOLERA INFANTUM.[1]

BY EDWARD WALDO EMERSON, M. D., CONCORD.

If during the last year out of every twelve deaths in Boston one had been from yellow fever, Asiatic cholera, or plague, every one would be alarmed; the legislature, city government, and medical societies would bestir themselves. But that was the actual proportion of the deaths reported from cholera infantum to the whole number of deaths of persons of all ages, and but little comment was excited. Yet the mortality from either of the dreaded diseases first mentioned, should they get a foothold in Boston, probably would never approach that from this common affection. We have got so accustomed to it that it is regarded as a necessary evil. But the advance of sanitary science and physiology may make it worth while to consider carefully from time to time our every-day diseases, and see if we are not better prepared to prevent or to fight them with the new tactics and weapons drawn from these sources, instead of using the consolations of philosophy for the annual loss under the old traditional methods.

With regard to this disease there is an opinion fast gaining ground that much if not all of it is due to causes largely within our power to prevent. As I do not propose to go into this branch of the subject, which is happily beginning to excite much attention here and abroad, I will quote but one passage from the excellent little book of Dr. John Simon, the chief medical officer of the Privy Council of Great Britain, on Filth Diseases, which was republished by the State Board of Health. He says, "In all filthy districts one particular class of diseases seems specially apt to stand in relief — the diseases, namely, which in respect of their leading symptom may be generalized as diarrhœal. . . . The mucous membrane of the intestinal canal seems peculiarly to bear the stress of all accidental putridities which enter the blood. Whether they have been breathed, or drunk, or eaten, or sucked up into the blood-vessels from the surface of foul sores, or directly injected into the blood-vessels by the physiological experimenter, *there* peculiarly the

[1] Read before the Massachusetts Medical Society, June 13, 1876.

effect may be looked for; just as wine, however administered, would 'get into the head,' so the septic ferment, whencesoever it may have entered the blood, is apt to find its way thence to the bowels, and there, as universal result, to produce diarrhœa."

In view of the great prevalence and fatality of this disease which the next month brings with it, under our present sanitary conditions, as surely as it does the white azalea or the water lilies, I have thought it might not be uninteresting to consider briefly in this paper its *pathology* and *treatment*, to see if these fields may afford anything new and profitable. Many of the standard books are somewhat disappointing in their chapters on cholera infantum. The pathology is not often very definitely stated. Were this done, perhaps modes of treatment more in accordance with the physiological indications thence deducible, and offering better prospect of success, would supersede the more or less blind and unsatisfactory methods often recommended.

Pathology. — The name cholera infantum is often loosely applied to various summer diarrhœas, but should be confined to that violent choleriform, gastro-intestinal catarrh of young children of which Leube says, in his article on the subject in Ziemssen's Cyclopædia, that "its symptoms so closely resemble those of Indian cholera that if one were confined to the observation of the individual case he could not say which it was." However the irritants or occasioning causes may differ, the weight of testimony of the best modern authors is so great for the entire identity of the symptoms and of the post-mortem appearances in a severe case of this disease and of cholera morbus with those in Asiatic cholera, that I may safely treat of the pathology of the choleraic state in general, drawing my instances from cases of epidemic cholera also.

This condition becomes all too familiar to the physician during the weeks when the thermometer reaches 90° Fahr., when he may see a rosy, well-nourished, active child, with perhaps no warning beyond a very short stage of indigestion, suddenly seized with violent and profuse watery discharges, and soon after with vomiting of quantities of clear or slightly tinged liquid. There is coldness, pallor, pinched appearance, and even cyanosis of the surface, beginning at the extremities, but rapidly spreading to the trunk and head, which was at first remarkably warm, and the abdomen is a little distended. Notwithstanding the great apparent cooling, the deep rectal temperature rises to normal or above, according to the best authorities. The pulse is rapid, and becomes momentarily more difficult to feel. The thirst is great, the drink vomited. At the end of two days, or in extreme cases even of twelve hours, the child may be hardly recognizable as it lies faintly fretful or drowsy, the fontanelles sunken, the lids half shut over rolled-up eyes, pulseless, pale, and cyanotic, with sharp features and cold, clammy, and

apparently wasted limbs, the abdomen relaxed, the skin wrinkled and inelastic, the urine suppressed, the upward and downward discharges less frequent or stopped, the respiration shallow, the breath cold, and perhaps alarming little premonitory twitchings of the limbs. In old times, when they used to bleed, it was found that only a drop or two of thick, dark-red blood would flow.

When matters have reached this state, the child will almost surely die, either by increasing sopor or by convulsions. Or, under favorable circumstances, before extreme algidity and coma are reached, reaction may set in. In fact, one striking point about the state is that it seems to be self-limited if the patient can survive until the turning-point comes, which is usually not more than two and a half days at farthest from the onset. Then the patient usually begins to recover with great rapidity, unless a relapse occur or entero-colitis or other complication arises. The vomiting ceases, the pulse returns, the stools are less frequent and contain more fæcal matter, the pinched and wasted appearance of face, body, and limbs disappears, with the return of warmth, color, and natural perspiration. Urine reappears, the rectal temperature falls to normal, or a little below, as the surface temperature rises. After death in the extreme algid state the surface temperature may slowly rise to normal or above, the body cools off very slowly, and rigor mortis comes on late and persists long.

The post-mortem appearances show no structural changes except a swollen condition of the solitary follicles and Peyer's patches. Sometimes thickening of the blood and occasional slight ecchymoses under the serous membranes are found. The intestinal walls are injected. The large abdominal veins, the right side of the heart, and the pulmonary arteries are found distended with dark blood. The kidneys are congested, and sometimes the tubules are full of epithelium. The left side of the heart and the arteries are very empty, the membranes of the brain a little injected, the brain itself bloodless and sometimes œdematous. The lungs seem empty and dry, and collapse greatly. The intestine is full of clear or slightly turbid fluid like the discharges, consisting mainly of water and chlorides, with a little albuminous flocculent matter, showing under the microscope swollen epithelium and granular matter.

What, then, is the pathological condition that occurs? The collective symptoms of paleness, coldness, cyanosis of all the surface, and probably too of the lungs, together with the internal objective and subjective heat and the immense activity of movement and transudation in the bowel, the suddenness of the collapse and apparent emaciation, and the equal suddenness of the recovery and the reappearance of heat and *turgor vitalis* would alone demonstrate, as plainly as any clinical phenomena could, that the main pathological condition was an entire change of the equilibrium of the circulation, namely, engorgement of the ab-

dominal at the expense of the peripheral and respiratory organs. The post-mortem appearances put the matter beyond all doubt. In fact, it is a condition in many respects analogous to two other circulatory disturbances, syncope and shock, the pathology of which states are set forth at length in an interesting article in the *Practitioner* for October, 1873, by T. Lauder Brunton. Just how this disturbance of circulation is wrought is not certain, but a physiological explanation may be hazarded. To do this more clearly I will venture very briefly to state the received theories as to the innervation of the intestines.

A. Local ganglia have been demonstrated in the intestinal walls.

B. The vagi and the splanchnic nerves jointly preside over the stomach and intestines.

C. The vagi (sensory in their function) are the accelerating nerves of the intestinal tract. Their irritation produces increased movement of the intestines and also heightened secretion, and after their section, as demonstrated by Brodie and lately more completely by H. F. Wood, of Philadelphia, even the most irritant cathartics fail to act.

D. The splanchnic nerves are the restraining nerves of the stomach and intestines. They are so, probably, through their being also the vaso-motor nerves of the intestinal tract. Their section, as the experiments of Moreau proved, causes increased secretion and movement; in other words, corresponds nearly in effects to the irritation of the vagi.

Would not the following theory, then, meet the exigencies of the case, namely: —

That the cholera poison or irritant acts with special force on the places where it is most concentrated, namely, the gastric and intestinal mucous membrane; that there its first action would probably be on the local ganglia, producing, we may suppose (since the existence of vaso-dilators is not yet proved) a local vascular spasm, which soon exhausts itself, and is succeeded by relaxation of the walls of the vessels, through temporary paralysis of the splanchnic nerve, resulting in strong congestion. This would cause greatly increased transudation into the alimentary canal and heightened peristaltic action. Moreover, the vagus, which, as above said, represents the sensory nerve of the stomach and bowels, would undoubtedly be irritated, hence causing increased movement of the bowels. The possibility of the phenomena of irritation of the vagi and splanchnic paralysis occurring at once from the same cause can be imagined when one considers how much sooner the contractility of small muscles of the vessels innervated by the splanchnic would probably be exhausted than that of the larger constrictor muscles of the bowels. The poison, if absorbed to some degree into the circulation, could cause directly (or, if not absorbed, by reflex action) spasm of vessels remote from the seat of its extreme and paralyzing action, namely, the peripheral and pulmonary vessels. The blood, then, almost stagnating in the

large central vessels and driven from the systemic arteries and left heart by their continued contraction, would accumulate in the right heart and pulmonary arteries. Hence the carbonic acid would increase and the oxygen diminish in the blood, and both of these circumstances have been found by experiment to increase peristaltic action. Finally, from prolonged irritation the vagus becomes paralyzed, and the stomach and bowels cease to act, and the left heart, not having blood enough to contract upon, and suffering also in its nutrition from the condition of the coronary arteries, becomes paralyzed, or else the brain becomes œdematous, and convulsions occur. In cases that recover we may suppose that much of the poison having been eliminated, or having worn out its effects or lost its activity, relaxation succeeds the spasm in the exhausted muscular walls of the peripheral and pulmonary vessels, while those of the abdomen, after long dilatation, relieved of their load by the equalization of the circulation, gradually recover their tone. So much for hypothesis as to the method of production of this pathological disturbance of equilibrium occasioning the alarming symptoms; of the fact we may feel reasonably sure.

Treatment. — The most ardent advocate of expectancy would admit that were it possible to remove the condition upon which all these phenomena depend, instead of trying to repress them individually, the former course would be as much more wise and desirable than the latter as the mending a leak in a roof would be than the constant renewal of the rain-spoiled wall-paper, plaster, and carpets.

I think it is not too much to say that we know enough of the main pathological condition to justify us in attempting to treat it directly, and that the newer treatments that have aimed at this object seem to have had success enough to justify a continuance of them. Certainly no patient looks a more unpromising subject for treatment than a child in advanced collapse from cholera infantum, and yet the change from all but death to life that may occur in a few hours, should reaction be brought about, is a fact as encouraging as it is surprising.

Steiner, in his excellent little hand-book of children's diseases, says of this disease, "Let the physician treat early and actively; inactive expectancy is nowhere more punished than here."

Prevailing Treatments. — Before speaking of the modes of treatment that seem most indicated by the known and suspected pathological conditions and to have stood the test of experience, I will briefly allude to those more in vogue, purposely omitting prophylactic treatment as a branch which opens too wide a field for the limits of this paper. In what follows, for reasons before mentioned, I shall speak of the choleraic condition, whether from sporadic or epidemic causes, as essentially the same state, and remedies effective in the worse form would probably, *a fortiori*, promise even more in the milder form.

Too many of the treatments proposed are symptomatic in the narrowest sense of the word. This is not true, however, with regard to the old *eliminative* treatment, which was at one time popular on theoretical grounds in the evacuant stage. Dewees is dissentingly quoted by Churchill as recommending "warm water to encourage the puking and enemata of warm water to clear the bowels," and even at present Goldbaum, a German writer, goes so far as to maintain that transudation is a favorable occurrence, and not to be interfered with. It is difficult to see, with the now commonly accepted theories of the emeto-catharsis being due to an irritant, organic or inorganic, working specially on the intestinal tract, why this is not a conservative process by which the body endeavors to rid itself of the offending presence. It is not improbable that it is so to a certain extent, but clinical experience shows that this process may continue until it becomes the main source of danger.

Energetic diaphoresis is frequently recommended at the very beginning of the attack.

Either at the outset or after one artificially produced catharsis, almost all writers recommend opiates to check the discharges, some combining them with astringents, and some with chalk or lime-water, on a theory that an injurious acidity prevails in the alimentary canal. These are continued, even in large quantities, into the stage of collapse.

Calomel was until very lately almost universally given in the first stage, with a view that it either was, or ought to be, beneficial in some way. The medical adviser, like Holmes's Rip Van Winkle, finished his directions thus: —

> "Last, with a dose of cleansing calomel
> Unload the portal system, — that sounds well!"

Niemeyer, who considers it a sheet-anchor in cholera infantum, thinks that its good effect is only to be explained by its power to arrest decomposition and hasten the removal of irritating ingesta. Leube, in Ziemssen's Cyclopædia, recommends it as an efficient cathartic. Meigs and Pepper hold that it acts in the large doses commonly given as a powerful sedative, too powerful, they urge, for a depressing disease.

Subnitrate of bismuth in large doses is much recommended to allay irritation by its mildly astringent and sedative action. Small doses of nitrate of silver are tried with similar object.

Hydrochloric and sulphuric acids, the latter combined with ether as the elixir Halleri, carbolic acid, and benzoin are all recommended on antiseptic grounds.

Chloral hydrate has been given by subcutaneous injection for its sedative effect. Of its good results more will be said later.

Now all writers recognize the importance of water, but many fear to give it in any other form than ice pills.

Spice poultices or sinapisms to the abdomen are recommended to

check vomiting, and Niemeyer urges the application of frozen compresses to the belly.

In the stage of collapse most authors advise alcoholic stimulants, usually the most rapidly diffusible ones, to be given frequently, in small doses, together with opiates, if the discharges persist.

Warm or hot baths have been recommended in this stage, sometimes with the addition of mustard. Intra-venous injection of water, or salt and water, or of milk, have been resorted to in the worst cases, and even transfusion of blood.

Finally, the bad percentage of recovery when marked collapse has been reached, either in the sporadic or in the epidemic form, under almost all treatments, has led some writers to believe that the patient has the best chance of recovery who is let alone to wait for the natural turn of the disease, should his strength hold out, and only given a little ice, with perhaps mild opiates and very thin, bland nourishment.

In the third, or reactionary stage, great care is advised in the administration of nourishment and stimulants, for fear of occasioning relapse or favoring secondary inflammations of the bowels or other organs.

No writer of any merit on cholera infantum fails to notice the main importance of dietetic treatment, but ideas on this subject differ widely. Niemeyer urges, as of primary importance, the necessity of absolute withdrawal of nourishment for a time, urging that whatever is given before the irritant has left the stomach will surely undergo abnormal decomposition and increase the mischief. Few others dwell on this point, but, if the child is being brought up by hand, recommend either barley-water or some similar mild farinaceous nourishment, or else beef-juice, chicken-water, or finally raw beef, scraped and perhaps moistened with red wine. Others recommend artificial foods made with reference to the deficient power of a child's digestive fluids to convert starch into dextrine, in which that transformation has been made outside the body.

Treatment Recommended. — Now if the views set forth in the earlier part of this paper fairly represent the pathological facts, what would be a rational treatment of the choleraic state?

Waiving the question of prophylaxis and its corollary, the question how to directly destroy or neutralize the organic irritant (if such exist) after its introduction into the body, the first indication is to correct the dangerous and unfair distribution of the blood in the body, to which the purging, vomiting, cramps, and coldness, seem to be directly due, and later the greater danger of coma, convulsions, or paralysis of the heart.

Second. If we fail in the first attempt, or do not succeed until late, we should supply the water and perhaps also the salts drained from the blood, as the thickening of the blood would prevent the good effects of the natural turn of the disease, should we have to wait for that, and perhaps dispose to various organic lesions.

Third. We should attend to the general hygiene, diet, etc., of the patients.

As to the first indication, the problem is how to cause dilatation of the peripheral vessels and contraction of the overloaded abdominal ones. If we had any means of getting directly at the splanchnic nerves, we could probably by galvanization of them directly cause the contraction of the mesenteric vessels. Ludwig and Thiry found that after section of the spinal cord in the neck, whereby dilatation of the mesenteric vessels was caused, galvanization of the lower segment would cause extreme contraction of them. Possibly galvanization applied over the middle dorsal region of a patient might produce the same effect. Chapman maintains that he can occasion it by ice-bags applied to the spine, which he uses to check diarrhœas and reflex vomiting.

Brückner, a German writer, claims that cold sand-bags of moderate weight, laid on the abdomen of cholera patients, mechanically check the access of blood to the abdominal vessels and favor its escape. Transudation is thus hindered, and perhaps absorption is favored; moreover, the peristaltic movements of the bowels are not so free. These sand-bags might be used carefully, with hot applications to the extremities.

We have a much better chance of success, however, if we try to unload the abdominal vessels by relaxing the peripheral ones by means of strong derivatives applied to the surface. Steiner strongly urges baths of from 99° to 104° Fahr. in the algid stage, combined with stimulants internally, and Leube, in Ziemssen's Cyclopædia, recommends the same. The distinction, too often neglected, between a warm bath and a hot bath is of vital importance here. No bath of less than 99° would be desirable. A writer in an English journal within a year or two, whose name I have lost, mentions his very gratifying success in treating the algid stage of Asiatic cholera by prolonged hot mustard packs. In accordance with this plan I treated three cholera infantum patients last summer, who were rapidly cooling off and assuming the characteristic pinched appearances of collapse, by suddenly wrapping them to the chin in cloths wrung out in hot water and mustard, with a blanket outside, and while thus mummied feeding them with plenty of ice-water and a little brandy. The pack was kept up half an hour or more, and during that time the change in the child's appearance was remarkable; the color and warmth returned to the surface, the tissues filled out, the features lost their pinched and old look, a natural perspiration broke out, the vomiting ceased, and the discharges grew less frequent. The mustard sheet was then withdrawn, but the child left enveloped closely in the warm, moist blanket. The pack in one instance had to be renewed at intervals, as a tendency to relapse manifested itself after some hours, but the condition of all mended in a marked manner after the first application, and all made a good recovery.

With regard to medication, if the choleraic state last any length of time, the blood must necessarily be altered by its drain of water and salts. Water, then, is the first medicine indicated, and should be constantly given in the form of ice-pills or spoonfuls of ice-water. Small enemata of slightly salt water immediately after a dejection might help to supply the lost fluid. Should vomiting and purging go far enough to cause a fear that the blood was becoming too much thickened, intravenous injections of water should be tried, and if it were thrown in at a temperature of 100° the heat might help relax the surface vessels. Milk and blood have also been used, but water seems more indicated, as in this disease the blood loses little albumen and no corpuscles.

As to the administration of drugs by the mouth, the fact of the probable very slight power of absorption at that time is usually overlooked. It is found that belladonna introduced into the stomach in large doses will not dilate the pupils. The medicines, stimulants, and food, then, can have little power in the present condition, nor yet help to bring on reaction, and if often repeated they may, when reaction sets in, be all greedily absorbed at once, and so do great harm, a fact to which Meigs and Pepper very properly call attention with regard to pouring in opium and alcohol in the algid stage. Internal administration of antiseptics has not so far seemed to fulfill the expectations of its advocates. As for calomel, it seems hardly indicated in the pure choleraic stage, unless there is the best reason to believe that some crude ingesta still present in the intestine demand a cathartic.

In the *Practitioner* of July, 1875, was a very striking article on the use of subcutaneous injections of chloral in the evacuant or algid stage of cholera, by Surgeon A. R. Hall, with accounts of cases treated by him and Mr. Higginson, another English army surgeon. The number of cases treated by these two gentlemen was large, and the onset severe and alarming, but they lost hardly a case. They injected, two-grain doses of chloral, diluted with ten times as much water, into the arms and legs of patients, some in extreme collapse, and in almost every case good and speedy recovery ensued. Few patients had more than eight to ten grains in all. Mr. Hall's theory was that the vascular condition was due to extreme vaso-motor irritation, and that the usual stimulant treatment only heightened the difficulty, as was shown by its small percentage of recoveries, sometimes only eighteen per cent. So he looked about for a sedative to relax the general spasm, and tried chloral with the brilliant results above mentioned. It is interesting to know that the government in India have taken pains to publish and circulate Mr. Hall's happy experience in the treatment of cholera collapse. His method seems to be well vouched for, and I see no reason why it should not be applicable to the choleraic state in children, if the injections were given progressively and carefully watched.

One word, in conclusion, as to babies' food, though that subject has been so well treated at recent meetings of the society that it is almost superfluous to say a word more. There is a point which I wish to allude to, namely, the great popularity among the rich and poor of *the nursing bottle with the flexible tube.* It is an invention of which Herod might have been proud. It is always in the baby wagon or the crib, in hot sun or close air. The child falls asleep with its nipple in his mouth. The mouth is usually never washed; the bottle and tube are, "with scalding water and with soda," so the mother says if you ask. Smell it, and see what you think. Take a parallel case. What prospect could a man have of immediate and satisfactory recovery from cholera morbus, or even dyspepsia, who should eat soup, freshly made perhaps, but out of a tureen which had been standing half a day with the remains of yesterday's soup in it, in a close room with a temperature of 90°; who, moreover, should never rinse out his mouth nor allow time for digestion, but should go to sleep with a piece of bread soaked in soup in his mouth, and, if colic or oppression caused him to complain on waking, should at once take more soup out of the unscalded tureen? This is not an agreeable picture, but it is a fair analogy. Is a teething baby's stomach stronger than a man's, that the doctor should tolerate the form of nursing bottle which encourages and contemplates a management of his diet exactly parallel to that in the unattractive picture I have just drawn?

RECTOCELE.[1]

REPORTED BY E. WARNER, M. D., WORCESTER.

THE following detailed report of the case is given as taken from the records, by Dr. C. A. Peabody, resident physician of the Worcester City Hospital, where the patient was treated.

A widow, aged fifty-nine, the mother of seven children, since the birth of her youngest child, thirty years ago, has been troubled with obstinate constipation and what she calls "falling of the womb." This has caused her increasing annoyance and discomfort, until at length she is no longer able to work, and life is almost a burden. Vaginal examination shows the perinæum to be whole and the uterus in nearly normal position. The posterior wall of the vagina, however, bags down to such an extent as to protrude from the vulva, especially on straining, and the finger introduced into the rectum passes forward into a pouch formed of the prolapsed part. The rectocele is about the size of a goose egg, and there is apparently a superabundance of tissue.

It being apparent that nothing short of surgical interference would give permanent relief, an operation was performed by Dr. Warner, as follows: —

[1] From the Report for Worcester District.

The patient being etherized and placed in the lithotomy position, a short vertical incision was made over the centre of the rectocele and going completely through the vaginal wall to the cellular tissue beneath. With probe and finger the vagina was separated from the rectum over nearly the whole extent of the prolapsed part; the detached portion of the vaginal wall was then excised with scissors. The portion removed was oval in shape, about three inches long by two and a half inches wide. There was but very little hæmorrhage. Care was taken not to remove the whole of the separated portion, but to leave a detached margin about an eighth of an inch wide. The edges of the wound were brought accurately together with twenty points of interrupted silk suture, the detached margins just spoken of being turned up so that their under surfaces were brought into apposition with each other.

The vagina was washed twice a day with tepid water, the bowels kept loose, and a catheter retained in the urethra. For one or two days there was slight fever, but this soon passed off and there were no other signs of constitutional or, indeed, of much local disturbance.

At the end of sixteen days the patient was examined and union found to be perfect, the cicatrix forming a raphé. The stitches were not disturbed, but came away of themselves.

When the patient was last heard from, several weeks after the operation, the cure remained perfect.

It will be seen that the operation here described differs somewhat from that usually performed in such cases. During the long thirty years of discomfort, the patient had submitted to much palliative treatment, and it was obvious that surgical interference alone could give satisfactory relief. Upon consultation, it was advised either to pare the edges of the labia majora and unite them by sutures, and thus close to a considerable extent the ostium vaginæ; or to perform the more usual operation of reflecting the mucous membrane of the prolapsed portion and folding the denuded surface together, and by the aid of sutures to hold the folded surface in accurate coaptation till union should take place, thus reducing the calibre of the vagina.

The first is known as the operation of episiorraphy, and was first introduced by Fricke. The second was attempted in a limited way by Baker-Brown, and is known as the operation of colporraphy, but it has been greatly extended and improved by Simon, Sims, Emmet, Thomas, and others.

The attempt to narrow by artificial means the vaginal canal, mainly for the treatment and cure of prolapse of the uterus, dates far back. At first, caustics of various kinds were used, including the actual cautery, and one writer even applied gonorrhœal virus to excite inflammation in the mucous membrane in order to secure the same result.

More recently the knife has been used by many operators, both

American and European. Ingenious modifications have been made to overcome practical difficulties, and yet the operation is difficult and the results often unsatisfactory.

In this case the operation of episiorraphy could be more easily done, and with better prospect that the operation itself would be successful, but the trouble would be only partially removed. The door of exit for the prolapsed posterior wall would be shut, but the rectal pouch would be but slightly influenced. No doubt things would be much improved, and the age and condition of the patient imposed no objection to this method.

The operation of colporraphy is more frequently done. The dissection is often tedious and bloody, the introduction of sutures and the perfect coaptation of the parts difficult, and the result often unsatisfactory. If at the time successful, it may not be so permanently. Constant pressure from the distended rectum behind, and the possible pressure of a prolapsing uterus from above, may stretch and relax the parts and finally reproduce the trouble. To either operation there were serious objections. The real difficulty consisted in a surplus of material — redundancy of tissue. A similar difficulty in many other parts would be promptly treated by excision. Why not excise here an elliptical portion, thus removing the surplus tissue, and unite the divided walls of the vagina by sutures as the flaps are united after an ordinary amputation of the breast? What reason is there why union should not take place? The operation seemed easy of performance, and, if successful, the result would be the best possible. The rectum would be held back, and the uterus kept up, by a firm, thick, enduring pelvic floor. Nothing in the anatomical relations of the parts involved presented any obstacle. Upon careful reflection the operation seemed natural, simple, and justifiable, but was there a precedent? Had it ever been done? The fact that no reference is made to it by any of the leading authors upon the subject, whose works could be conveniently consulted, excited the suspicion that some serious objection existed to its practical application. But, by chance, the search for a precedent was not wholly fruitless. In the report of the Woman's Hospital at Washington, for the year 1874, edited by Dr. Thompson, a few cases are reported in detail, and the statement is made that seventeen cases in all, in hospital and private practice together, have been operated upon by him, and all the cases were entirely successful. This seemed decisive, and this method was at once determined upon. The result is given above. As yet I have not seen the report of any other operator making use of this method. In *The American Journal of Obstetrics and Diseases of Women and Children*, edited by Paul F. Mundé, in the April number of the current year, is a Report on the Progress of Gynæcology during the Year 1875, by its editor, in which it is stated that

the operation of posterior colporraphy, after Simon of Heidelberg, for complete prolapse of uterus and vagina (removing a V-shaped flap of mucous membrane from the posterior wall, at a point near the cervix, and uniting by numerous sutures), has been performed three times in New York during the past year: twice by Dr. Wm. T. Lusk, at Bellevue Hospital; once by himself. In Dr. Lusk's cases the result was perfect; in his own the predominance of the cystocele renders a second operation for this deformity necessary. Here, as elsewhere, no reference is made to any other method than the one which confines itself to a dissection of *mucous membrane only*. The case here reported adds another to Thompson's list of seventeen, all of which have resulted successfully. Primâ facie, there seems to be no good reason why this method of operating should not succeed; in fact, the protected situation of the parts seems peculiarly favorable to union by first intention. I used the silk suture in this case for the reason that it seems to be as little irritating as any, and, if overlooked or forgotten, it either comes away of itself, as in this case, or it does no harm. It is no easy thing to remove wire sutures from a contracted vaginal canal when they are deeply imbedded in parts remote. It will be observed that the stitches were thickly set, approximating the parts perfectly; that they were entered at least a half-inch or more from the edge of the vaginal flap; that the sphincter ani was not paralyzed, nor the bowels kept confined. In one word, the operation was easy, the after-treatment simple, the result perfect.

RECENT PROGRESS IN PHYSIOLOGY.[1]

BY H. P. BOWDITCH, M. D.

FUNCTIONS OF THE CORTEX CEREBRI.

Investigations by Local Destruction. — In all the experiments above alluded to, the motor functions of the cortex were studied by irritating the points in question and noticing what movements were produced. Another class of investigations consists in destroying the part of the cortex whose function is to be studied, and observing what muscles become incapable of voluntary movement. In experiments of this sort it was soon found that, whatever may be the immediate result of the mutilation, the paralysis wholly or in great part disappears if the animal survives the operation a few days or at most one or two weeks. To explain this a sort of vicarious function of the different portions of the cortex has been assumed, but various opinions have been held as to the parts which are thus capable of assuming each other's functions. Carville and Duret[2] consider that every part of the cortex of each

[1] Concluded from page 75.

[2] Archives de Physiologie, 1875, page 453.

cerebral lobe may act for every other part of the cortex of the *same* lobe, but deny that the functions of any portion of one lobe can be assumed by the corresponding (or by any other) part of the *opposite* lobe. This opinion derives apparent support from the fact that after the disturbances produced by a local destruction of cortical substance on one side have passed away, they may be reproduced by a further destruction on the same side, but not by a destruction of the corresponding part of the opposite side.

Soltmann,[1] on the other hand, is of the opinion that when a portion of the cortex is destroyed, its functions may be performed by the symmetrically situated portion on the opposite side. He supports this view by the following experiment. On a dog four or five days old the cortex of the whole præ-frontal and of part of the post-frontal lobe on the left side was removed. The animal showed no motor disturbances, and recovered completely from the operation, being distinguished only by a somewhat smaller size from the other pups of the same litter. Three months later the brain was exposed on the right side and the centre for the fore leg irritated. Movements of the leg not only of the opposite but also of the same side followed this irritation. It was found impossible by any variations of the intensity of the electric current or of the point of application to produce movements in the leg of the opposite side alone. When, however, the centre for the hind leg was irritated, movements were produced in the leg on the opposite side alone, the corresponding centre on the other side being apparently still intact.[2]

The fact that such diametrically opposite opinions can be held by intelligent observers shows clearly the need of renewed investigations and improved methods. Goltz has accordingly in a recent article[3] given the results of a series of experiments made in a way which seems calculated to avoid some of the difficulties experienced by other observers. One of the principal obstacles in the way of arriving at a correct solution of this question is the difficulty of keeping animals alive after the loss of a considerable portion of the cortex cerebri. Profuse hæmorrhage or inflammation of the brain substance often leads to a fatal result before the most important observations can be begun. To avoid these difficulties, Goltz had recourse to a method of removing the cerebral substance which is often employed for making anatomical preparations of the cerebral blood-vessels, namely, washing it away by a jet of water thrown with force sufficient to break up the delicate brain tissue without greatly injuring the firmer blood-vessels. The jets of water were applied by means of canulæ variously formed and inserted

[1] Jahrbuch für Kinderheilkunde, ix. 106.

[2] See also Brown-Séquard's observations on vaso-motor and other disturbances on the *same* side as the cerebral lesion, Archives de Physiologie, 1875, page 854.

[3] Pflüger's Archiv, xiii. 1.

through openings trephined in the skull. For a very circumscribed destruction of the cortex a single opening was sufficient. For a more extended operation several holes were made near each other, and the brain substance between them removed by a process of tunneling. By a series of operations of this sort, which, however, were by no means bloodless, Goltz succeeded, in one instance, in washing away all the convolutions of one of the cerebral lobes which could be reached by openings through the skull. The animal lived in this condition for several weeks, and was used for numerous observations.

As the result of his investigations, Goltz maintains that the extent, and not the locality, of the injury is of importance in determining the nature of the disturbance produced; *e. g.*, the effect of the operation is the same whether the brain substance is washed away in the anterior portion of the so-called "excitable zone" of Hitzig or far back in the posterior lobe. This want of agreement with the results obtained by other observers may perhaps be partly explained by the fact that in all Goltz's operations a comparatively large portion of the brain was destroyed; *e. g.*, where the jet of water was applied through a single opening in the skull, the diameter of the excavation thus produced was about 1.7 centimetres.

The author describes the results of unilateral destruction of the cortex cerebri as disturbances (1) of sensation, (2) of vision, (3) of motion, all on the opposite side.

I. *Sensation.* Immediately after an extensive destruction of the cortex the animal is often completely anæsthetic on the opposite side. Pinching and pricking of the limbs and face call forth no expression of pain. This condition is, however, transient. A few days after the operation painful impressions are felt all over the body, but less distinctly on the opposite side, as may be shown by observing the weights which are sufficient to produce annoyance when placed on the different paws. To this condition of impaired sensibility, which is found to be very persistent, the author attributes, in part at least, various awkward movements of the limbs on the side opposite to the injury. Thus a dog with an injury to the cortex on the left side, when placed upon a table, is apt to fall off whenever, in moving about, his right feet come near the edge, because, according to Goltz, his sensibility is so far impaired on that side that he does not perceive quickly enough that he is treading on nothing. Disturbances of vision and motion doubtless also contribute to this result.

II. *Vision.* Blindness on the opposite side results from an extensive destruction of the cerebral cortex. This is at first so complete that the animal in moving about strikes its head against obstacles on that side. Afterwards sight is so far recovered that obstacles are avoided, but there is a persistent defect of vision, in consequence of which objects

seen with that eye fail to call forth their usual emotions. Thus a dog with an extensive destruction of the cortex on the left side, and with the left eye extirpated, learns to move about without running against obstacles, but shows no fear of objects which before the operation had excited great terror, does not recognize a piece of meat held before his face, and is not frightened when held outside of a window, as is the case with an unmutilated dog. To explain these phenomena, Goltz makes the hypothesis that a dog thus operated on has very imperfect sensations of the position and color of objects whose images are thrown upon his retina; that everything appears gray and indistinct, as if surrounded by a mist. He therefore sees objects sufficiently well to avoid them in moving about, but gets very imperfect ideas of their nature. Another hypothesis, which seems quite as reasonable, would be that the retinal images produce their normal sensations, but that the power, acquired by experience, of interpreting these sensations has been lost in consequence of the injury.

III. *Motion.* Extensive destruction of the cerebral cortex causes at first a paralysis on the opposite side, so complete that the animal in attempting to stand falls upon that side. After a few days, control over the limbs is so far restored that the animal moves about in an apparently perfectly normal manner. A close examination, however, reveals a variety of motor disturbances which are very persistent in their character. In the first place, if the animal is moving on a very smooth floor the feet on the side opposite to the injury often slide out from under it. Even when lying quietly the animal often allows its legs on that side to assume, or be brought into, very awkward positions, without exhibiting any annoyance. These phenomena may depend to a great extent on the diminution of sensibility above described, but there are other motor disturbances which cannot be thus explained. For instance, a dog with an injury to the cortex on the left side does not use the right fore paw to reach and hold its food, nor to scratch away the earth for the purpose of burying a bone. If trained to give the fore paw at command, a dog thus operated on gives invariably the left paw, and if by long persuasion and reiterated commands the animal is finally taught to give the right paw, a further destruction of the cortex on the same side as before produces the former helpless condition. In other words, it is the power to use the paw, not as a locomotive organ, but *as a hand*, which is affected by the injury.

It will thus be seen that the effects of destruction of the cortex are of two sorts, namely, transient and persistent. It is the latter only which, according to Goltz, are to be regarded as indicating the functions of the part destroyed, and which he calls therefore "phenomena of deficiency" (*Ausfallerscheinungen*). They may perhaps be best described collectively as a failure on the part of the animal to make an intelligent use

of its sensations, and its power of motion. The former, *i. e.*, the complete loss of motion, sensation, and vision, he regards as due to an inhibitory process, starting from the wound in the brain and acting upon deeper-seated centres. The phenomenon is therefore similar to the temporary absence of all reflex movements in an animal whose cervical cord has been divided. If this theory is correct, it is necessary to suppose that the mechanical irritation due to the removal of a portion of the cortex acts not only in a very different way, but over a very different extent of brain substance from an electrical irritation applied to the same spot. From this point of view Goltz regards the immediate results of local destruction of the cortex as observed by Hitzig[1] as inhibitory phenomena, and dissents from Hitzig's conclusion that the disappearance of the disturbances produced by the injury indicates that some other portion of the cortex has assumed the function of the part destroyed. As conclusive against Hitzig's view he instances his own experiment in which a dog with the *whole surface* of a cerebral lobe washed away moved his limbs, head, tongue, eyes, eyelids, ears, jaws, and tail in a perfectly normal way.

Eulenberg and Landois, whose observations were alluded to in the first half of this report, found that cauterization of Hitzig's centres for the movements of the limbs caused a rise of temperature in those parts amounting to from 5° to 7° C., and lasting two or three days. Their statements have recently been confirmed by Hitzig.[2] It is difficult to reconcile these observations with those of Lépine (on the rise of temperature in the limbs caused by irritating the cortex), except on the supposition that the phenomenon depends upon the irritation and not upon the destruction of the parts, as the authors suppose. This view is not inconsistent with the authors' observation[3] that feeble electrical irritation of the cortex caused a diminution of temperature in the limbs; for in the first place this cooling was very slight in amount (0.2° to 0.6° C.) and was not a very constant phenomenon, and in the second place there is reason to believe that irritation of the cortex by the actual cautery has a very different effect from that produced by electricity.[4] By an extension of Goltz's theory it might fairly be assumed that destruction of a portion of the cortex causes a temporary inhibition of vaso-motor centres as well as of those of locomotion, vision, etc. This view is quite in accordance with Brown-Séquard's[5] recent observation that all the effects of section of the cervical sympathetic may be produced by cauterization or "thermic irritation" of the cortex. In this case, however, the results were produced on the *same* side as the operation.

[1] Reichert and Du Bois Reymond's Archiv, 1874, page 392.
[2] Centralblatt für die medicinischen Wissenschaften, 1876, page 323.
[3] Centralblatt für die medicinischen Wissenschaften, 1876, page 262.
[4] See Brown-Séquard, loco citato.
[5] Loco citato, page 864.

REPORT FOR HAMPDEN DISTRICT.[1]

G. S. STEBBINS, M. D., REPORTER.

THE year commencing June 1, 1875, and ending at the present time, has not been remarkable for the prevalence (within the district embraced in this report) of any very alarming or unusually fatal epidemic, such as now and then establishes an important epoch in the history of disease in given localities. Diseases of a non-malignant and a comparatively non-fatal type have, however, prevailed at intervals, and to a very general extent, and among them may be mentioned rheumatism in all of its varied forms, and epidemic influenza, with its oft attendant train of pulmonary diseases, bronchitis, pneumonia, pleurisy, and pleuro-pneumonia. The prevalent form of influenza has been somewhat severe, and the atmospheric conditions giving rise to it have greatly conduced to the acuteness of the rheumatic affections. Pneumonia has partaken of the general severity of inflammatory disorders, and a considerable fatality has attended its prevalence. Phthisis, both tubercular and inflammatory, the ever-present scourge of New England, has, as usual, numbered among its victims its average quota of all ages, and from every rank of society.

Diphtheria in its general prevalence has assumed more of the character of an epidemic than any other disease, and owing to its frequency and unusual virulence it has attracted and demanded the closest attention, the most thorough observation, and the most patient investigation of the profession. To us, as to the profession in general, the origin of this malady is still shrouded in mystery. It appears to be governed by no general law of onset or progress. Unlike cholera, yellow fever, and small-pox, which thrive best and rage most along the track and amid the vapors of oceans and rivers, in the miasm and noxious exhalations of crowded settlements, selecting the ill-fed and ill-clad as their chosen victims, diphtheria breaks out all at once in isolated, inland towns of the loftiest and driest situation, which nature drains to perfection and apparently supplies with the purest atmosphere, and whose population is as sparse as it is well fed, clothed, and provided with the comforts of life. It often selects as its first and favorite subjects those of apparently the most perfect health and vigorous constitutions. In its visitations it has passed by populated marshes, and dirty, crowded streets; while it has carried dismay and destruction throughout the avenues and fashionable abodes of the higher classes.

Among the questions which have been raised and discussed here as elsewhere without satisfactory solutions are these: Is diphtheria a poison of the blood *per se*, with a local manifestation of the same in the throat, or is it a local disease, the poison emanating from without, and the blood poisoning being secondary? Is it a disease of locality, dependent upon local causes, engendered by improper sanitary regulations and disregard of hygienic laws? Is it a disease dependent, wherever prevailing, upon a general miasmatic influence, aggravated by local causes? Is it a disease altogether unlike membranous croup, or is there any relationship existing between the two?

As regards the first question, whether it is primarily a blood disease or

[1] Read before the Massachusetts Medical Society, June 13, 1876.

local in its origin, there have been and still are supporters of both hypotheses. If constitutional, why so many precautions against disturbing the local patches, lest by irritating the parts and detaching the false membranes we expose surfaces and establish a nidus for absorption of the virus? If the blood is already surcharged with poison, why fear absorption? If the disease be local in origin, why deprecate all local treatment, and resort almost exclusively to constitutional means of relief and cure? Whatever may be the source of the poison, the evidence proves that the ultimate result is a poisoning of the blood, and that, too, of the most virulent kind, overpowering the nervous system, often arresting its functions, and producing rapid, fatal exhaustion.

Touching the second question, namely, Is it a disease of locality or is it a disease dependent upon some general miasmatic influence aggravated by local causes? I would ask, If a disease of locality, why is it that diphtheria so often prevails in apparently the healthiest situations, while it gives immunity to places where one would naturally expect the disease to appear first and rage the worst?

While there is much evidence to show that it is a disease of locality, propagated by infection, not to say contagion, is there not much of the natural history of diphtheria which cannot be satisfactorily accounted for upon this theory? We know that certain chemical changes and conditions of the atmosphere give rise to irritative diseases of the respiratory passages, independent of any and every local cause. For instance, we may mention the epidemic influenza which a few years ago prevailed almost simultaneously over a large portion of the country, those in a certain city affected by it numbering tens of thousands. The epizoötic, which three or four years ago disabled nearly all the horses from Maine to Florida, and from Boston to the Black Hills, cannot be said to have been due to local causes, but was attributed to certain atmospheric changes or conditions. Here the question is raised, Do we sufficiently study atmospheric changes and their relative effects in producing or aggravating diseases of this class? May not and does not some chemical change occur in the atmosphere, by which the natural proportion of its component parts is so altered that it becomes itself the irritating source of the disease by its direct action upon the throat and respiratory organs, or produces the blood poisoning by arresting normal function, preventing elimination of effete material from the system?

Regarding the question, Is there any relation between membranous croup and diphtheria, or are they distinct diseases? it is one admitting of more than a passing doubt, and of careful discussion.

I am compelled to believe that many more cases have been recorded in the physicians' case-books during the prevalence of diphtheria in the Hampden district than have actually occurred. I regret to say that it has been evident that some physicians among us have, to a greater or less degree, magnified the frequency of its occurrence by calling almost every case of sore throat diphtheria, and gaining notoriety in the successful treatment thereof. But setting aside all exaggerations, the disease has seldom if ever prevailed to so general an extent as during the past year.

Typhoid fever has prevailed to a considerable extent, though not to the degree that it has in former years.

Diseases of a malarial type, remittent, intermittent, and congestive fevers, have been frequently observed, and are apparently on the increase in this section of the Connecticut Valley. Diseases of the nervous centres and the general nervous system have been very common, and there appears to be a growing tendency to the development of this class of disorders. Diseases which are ever the special hazard of childhood and infancy — measles, scarlet fever, spasmodic and membranous croup, cholera infantum, whooping-cough, and parotitis, have, during their favorite seasons, been more or less prevalent, though generally of a mild type, and but a small rate of mortality has attended them.

Thus far having dealt in generalities, I will presume upon your good nature and patience by reporting a few special cases of more than ordinary interest to us who live and take our observations on the outer borders of the commonwealth.

Case I. is that of the birth of a child occurring in the practice of Dr. A. R. Rice, of Springfield, July 8, 1875. The weight of the child, at birth and unclothed, was twenty pounds and two ounces; sex male, well developed, of symmetrical proportions; measurements taken at birth by the attending physician were as follows: occipito-frontal, sixteen inches; occipito-mental, measuring from angle of the jaw, sixteen and three fourths inches; length of child, twenty-eight and three fourths inches; girth of chest under the arms, twenty and one half inches; breadth of shoulders, ten and one half inches. The infant seemed unusually strong and active in its movements. He was of Irish parentage, the mother a primipara, weight one hundred and thirty pounds, height five feet four inches, age twenty-three. She was in labor twenty-four hours, though in active, progressive labor only about six hours. Presentation was natural; liquor amnii escaped about four hours previous to birth; caput succedaneum was very prominent; shoulders were not born for an hour after the head, and had to be forcibly extracted, as did the hips, both of which firmly engaged in the pelvis. There was no rupture of the perinæum. The mother made a good and rapid recovery, and the child still continues to thrive. There is nothing about the physique of the father that is remarkable. He is of middle age, of perhaps more than ordinary size, and of vigorous constitution.

Case II. is also an obstetrical one, happening in the practice of Dr. Calkins, and attended by him at the Home for the Friendless. The mother in this as in the former case was a primipara. Labor was slow and protracted. Vertex presented, and after several unsuccessful attempts at delivery with the forceps, a more thorough investigation revealed the fact that the head was hydrocephalic, with a large accumulation of water between the scalp and the cranium. After puncturing and drawing off about two quarts of water, forceps were reapplied and delivery accomplished. The peculiarities of fœtal formation were as follows: eyes greatly protuberant, and situated at the extreme upper border of the forehead; double hare-lip; cleft palate; fingers and hands greatly deformed; spontaneous amputation of the left foot, the stump being almost a perfect fac-simile of that following a Pirogoff's amputation.

Case III. was one which occurred in the practice of the contributor of this report. I was called to my patient after she had been having, as she said, reg-

ular labor pains for two hours or more, it then being eight o'clock A. M. Upon digital examination I found that the os uteri had not dilated in the least, and I gave her an opiate, telling her husband to call me whenever circumstances indicated the need of my services. At eleven A. M. I was summoned, and found her in frequent, violent pains, but, as before, no dilatation, and no expulsive force communicated to my finger, which I forced within the os. Placing my hand upon the fundus I found it forcibly contracting, and the whole force of the uterine pains was spent and lost there. At about four P. M. the os was dilated to the size of a silver half-dollar, and still there was no contraction upon the fingers introduced within the mouth of the uterus and retained during a violent pain, nor was any expulsive force apparent there. The presentation proved to be breech, the head hydrocephalic, being a mere bladder of water, the cranial bones being widely separated, and, as it were, floating upon its surface; and in addition there was spina bifida, with a double tumor of considerable size. This condition of the head, as you will at once observe, explained the mystery concerning the non-expulsive and non-dilating effects of the pains, for the fundus contracting upon the bladder of water flattened it out with so little resistance that it could not aid in the expulsion of the breech. Delivery was finally accomplished with instruments, and under direction of a veteran friend in the service.

Case IV. was a patient of the writer who had a stricture of the urethra in its entire length. He was forty-five years of age, and, accepting his own statement, had not voided his urine in a stream for seventeen years. For several years he had been in the habit as well as under the imperative necessity of passing a small iron wire, curved so as to adapt itself to the altered curve of the urethra (the wire being about twice the size of an ordinary knitting needle), and after it had remained for about fifteen or twenty minutes he could, on its withdrawal, void his urine guttatim. I saw him labor fully half an hour to introduce his wire, having to use a painful degree of force to work it through the stricture, which was apparently pretty uniform throughout the whole urethra. This condition of things was doubtless largely due to the long-continued rough treatment at his unskillful hands, though the primary cause was gonorrhœal inflammation. The patient had, in various places, undergone almost every variety of treatment except urethrotomy, and he had received but little encouragement from surgeons in this direction. An urethrotome was made of the exact size and curve of his wire sound, and after he had dilated his urethra as well as he could, I introduced my instrument into the bladder, withdrew just outside the sphincter, adjusted the blade, and divided the stricture the entire length of the urethra. I then introduced a larger and straight urethrotome, divided the opposite urethral surface in like manner, after which I introduced a large-sized catheter. According to directions, he continued to pass a catheter whenever he desired to void his urine, and he also passed the largest-sized sound two or three times daily, stretching the passage for half an hour each time. He followed up this treatment for several weeks, with no recurrence of the trouble.

Case V. is a case of lithotrity in the practice of Dr. David P. Smith, of Springfield, which is of unusual interest, owing to the size of the stone crushed

and the well-marked diminution of the resulting cystitis after each operation of crushing. The patient was one of the resident clergymen, of middle life and vigorous constitution. He had been inconvenienced by the presence of the stone for several years. It was with no ordinary difficulty that so large a stone was handled and successfully crushed by seven successive operations, covering a period of about three months. Severe cystitis followed the first operations, and, as before stated, there was a marked abatement of the same following every crushing. An important lesson taught by this case is that much larger stones can be crushed with safety and success than has generally been supposed. The stone was phosphatic, and the saved fragments weighed an ounce and a half. The bladder regained its normal condition and function.

CASE VI. is a case of vesico-vaginal fistula, also a patient of Dr. Smith's, the opening in the bladder being situated near the entrance of the urethra and of sufficient size to allow of an abundant flow of urine. The first operation was performed at the patient's residence in an adjoining town, and the two later ones at the doctor's office in this city. The opening is now so nearly closed as to admit of but a slight dribbling of urine. The point of interest in the case is that the last operations were at the doctor's office, the patient being allowed to walk about as usual, with sutures in situ, instead of being confined to the bed or house, as is more generally the case, thereby saving time and expense to those unable to pay a physician for attendance at a distance.

CASE VII., occurring in the practice of Dr. P. LeB. Stickney, of Springfield, was that of a young man aged twenty years, who had been a stout, healthy person from early infancy; employment roofing, in which he was accustomed to hoist loads of gravel and cement to the tops of buildings. On the 14th of January, 1876, the doctor was first called. The patient was then complaining of loss of strength, with diarrhœa, and loss of appetite, and had been ill for two months previously. The most prominent symptom aside from the great debility and diarrhœa, was pain of a dull, moderate character in the left side and lower border of the chest. On examination the action of the heart was found to be stronger than normal, especially its impulse, but no enlargement of the organ was apparent. There were no valvular murmurs or other abnormal sounds. The upper portion of the left lung gave on percussion a clear, resonant sound; auscultation revealed slightly imperfect and indistinct respiratory sounds. Lower portion of the lung quite dull on percussion, and by auscultation no clear respiratory sound could be distinguished, yet there was no cough nor dyspnœa. Pulse normal and 75 per minute; temperature normal. Under the use of tonics and mild astringents, diarrhœa was relieved, appetite restored, and strength improved. There was some pain in chest, which was relieved by belladonna plaster. Patient continued to improve in general health, pain in chest ceased, but dullness of lung increased; action of heart became more violent; pulse on the 10th of February 110; temperature 99°; still there was no cough or dyspnœa. Found some inconvenience in lying on right side. Treatment for three weeks previous, alteratives, diuretics, and tonics, with blister to sides. It was now evident that effusion had taken place.

February 19th. Dullness on percussion increasing, the chest evidently filling up; no respiratory murmur heard except at apex of lung. On the 21st

effusion seemed rapidly to increase, apparently filling the whole left cavity. On the 22d the intercostal spaces were found puffed out. As yet there was no cough, no dyspnœa; pulse 112; temperature normal; heart pushed over to the right side, the apex felt distinctly pulsating on right side of sternum. Patient tapped between eighth and ninth ribs, using aspirator; thirteen pints of a greenish-colored serous fluid were drawn off. Microscope revealed some granular matter, but no well-defined pus globules. Some pain followed the operation; heart returned to its normal position; pulse fell to 90; the dullness continued, no respiratory sound discernible, no evident expansion of lung.

On the 22d of March patient was again tapped, nine pints of a similar fluid being drawn off, though of a pinkish color. Pulse gradually diminished to 84, where it remained. Still no dyspnœa; general health good; patient able to go out.

On April 1st was attacked with intense neuralgic pains, involving more especially the facial nerve of the right side. On the 23d of April was tapped again, and eleven pints of a darker and bloody-looking fluid escaped; neuralgia disappeared; appetite improved; pulse 85; temperature normal; no dyspnœa; impulse of heart stronger.

May 15th. Appetite poor; strength less; pulse feeble, and 95 per minute; bulging of chest at point of puncture; tenderness on pressure; dullness on percussion; no respiratory sound to be heard. Preparations made to tap again May 18th, but on the morning of this day the first cicatrix opened of itself by ulceration, and, as nearly as could be ascertained, about eight pints of fluid were discharged, the first portion bloody and rather thin, the latter mixed with pus.

May 15th. Pus has escaped freely, and on arising from bed and removing poultice at least four pints of pus were discharged. At this date pulse is 85, appetite improved, no cough, no dyspnœa, strength improving. During the twelve weeks' illness of this patient forty-five pints of fluid have been drawn from his left side.

Case VIII. is one still under the care of Dr. W. G. Breck, of Springfield; patient a man forty-five years of age, who fell, on the 23d of October last, a distance of twenty-seven feet, striking squarely on his back, dislocating, according to the doctor's diagnosis, the third dorsal vertebra.

Since the date of injury there has been paralysis of the body below that point, with involuntary discharges from bladder and rectum. The flesh has sloughed from both heels, and there has been sloughing of the nates so as to expose the sacrum and coccyx, which are now covered by healthy granulation. Patient has an excellent appetite, is in good flesh, and is in quite good health and spirits. Complains of severe piercing pains at seat of injury, with a sense of painful constriction of the body. There are at times violent involuntary movements of the lower extremities, and his sexual organs respond to excitants to the extent of complete erection. The most remarkable thing about his case is the degree of health and strength he now enjoys, considering the length of time elapsed since the injury, the extent of paralysis, amount of sloughing, and drain upon the constitution.

CASE IX. is one possessing an important moral and a certain practical lesson; therefore I report it not in order to show the progress which the science of medicine has made in this district, but rather to illustrate its peculiar phases. Dr. Stickney had been applied to several times by the same lady, during a period of five or six months, for relief from suppressed menstruation. Its arrest, the patient declared, was due to a cold bath which she indulged in just at the advent of a period, and she could not possibly assign any other reason. Cathartics, emmenagogues, etc., did no good. Not having seen or heard anything of his patient for nearly two months, the doctor had given her up, not expecting to hear from her again. Being summoned suddenly one night not long since to see her, he learned upon inquiry that she had been under the care of a surgeon who diagnosticated her disease to be a tumor requiring tapping as the only means of relief and cure. He had already tapped twice, the first time drawing off a quart of water, the second time a pint, and had engaged to tap the third time on the day after Dr. Stickney was called. Dr. Stickney soon found the lady who had been so long suffering from suppression of menses to be in labor, and when he, in answer to the interested and anxious inquiries of surrounding friends, announced his diagnosis, both patient and friends denied in concert the possibility of such a dilemma, and hastened to denounce the doctor's opinion and judgment at the same time. A living child was soon born, though the patient still persisted that the whole cause of the tumor was a mystery to her.

The practical lesson is that a common trocar may be plunged into the uterus, the liquor amnii drawn off repeatedly, and no harm result save that of giving rise to premature delivery. I do not report this case as one altogether without precedent, or with the expectation that any one will attempt to repeat the experiment, but to show with what impunity even the uterus may be tapped.

THE SURGICAL HISTORY OF THE WAR.

EVEN the great reputation gained by the now celebrated Circular No. 6, which was issued from the medical department of the government shortly after the close of the late war, has hardly prepared us for the almost gigantic task which has been undertaken by the Surgeon-General and his energetic associates of the Army Medical Museum. Although more than ten years have elapsed since the commencement of this undertaking, it is hardly a matter of surprise that the volume which has lately made its appearance completes but the first half of the whole work.

Considering the limited supply of clerical force which at times has been at the disposal of the department, and the uncertainty of government action in regard to the necessary appropriations, we may congratulate those who have had the work in charge, as well as the profession at large, upon the favorable prospects of its completion.

The volume lately issued is the surgical volume of the second part of the work. In the first surgical volume, in addition to a chronological summary of losses in battles and engagements, an exposition of the statistics and de-

tailed reports of special wounds and injuries of the several regions was begun, it being found preferable to adopt this method of arrangement. Nearly fifty thousand cases are here placed on record. The second surgical volume continues the account of special wounds and injuries, containing those of the lower portion of the trunk and upper extremities, which are illustrated from the records of nearly two hundred thousand cases. As a sample of the scale and character of the material here collected we would point to one item, namely, the records of thirty-seven hundred and twelve excisions. The volume which is yet to appear will begin with injuries of the lower extremities; a chapter will succeed on fracture and luxations from other causes than gunshot injury. Pyæmia, secondary hæmorrhage, gangrene, and tetanus will receive a proper share of attention, and the closing chapters will be devoted to anæsthetics, surgical apparatus, and the transportation of wounded. A mere enumeration of the subjects treated of fails to give any adequate idea of the amount of care which has been expended upon these volumes, of the faithful following up of the histories of cases long after the termination of the war, a work which the records of the pension bureau made possible, of the elaborate illustration by photographs and wood-cuts, and of the carefully compiled tables of statistics. Considering that no work of this character, of equal magnitude, has ever been undertaken, and that, with the exception of the Crimean, the history of the surgery of no other war has ever been attempted, we may congratulate the editors of this work on the success which has attended their treatment of so huge and complicated a task. We hesitate to criticise even small matters where there is so much to admire. We cannot help feeling, however, that the text would appear to greater advantage if left to its own unaided merits, without help from borrowed illustrations of anatomy or of well-known surgical instruments. This fault, and an attempt at a little too elaborate original illustration, seem to us the chief and almost the only drawbacks of the present volume. We cannot help thinking that so grand a work does not need any such adventitious aids. This is, however, an æsthetic rather than a practical drawback to the value of the book, which, with its companion volumes, must always stand as a monument of medical and surgical science which every American physician may point to with pride.

INTERNATIONAL MEDICAL CONGRESS.

The International Medical Congress will be formally opened at noon on Monday the fourth day of September. The sessions of the congress and of its sections will be held in the University of Pennsylvania, Locust and Thirty-fourth streets. The general meetings will be held daily, from ten to one o'clock. The sections will meet at two o'clock. Luncheon for members of the congress will be served daily in the university building from one to two o'clock.

On Wednesday evening, September 6th, Dr. J. J. Woodward, U. S. A., will address the congress on the Scientific Work of the Surgeon-General's Bureau.

The public dinner of the congress will be given on Thursday evening, September 7th, at seven o'clock.

The registration book will be open daily from Thursday, August 31st, to Saturday, September 2d, inclusive, from twelve to three P. M., in the hall of the College of Physicians, northeast corner of Thirteenth and Locust streets, and at the University of Pennsylvania on Monday, September 4th, from nine to twelve M., and daily thereafter from nine to ten A. M. Credentials must in every case be presented.

Letters addressed to the members of the congress, to the care of the College of Physicians, northeast corner Locust and Thirteenth streets, Philadelphia, during the week of meeting will be delivered at the University of Pennsylvania.

The secretaries of State and Territorial medical societies are requested to forward without delay to the chairman of the Committee on Credentials, I. Minis Hays, M. D., 1607 Locust Street, Philadelphia, lists of their duly accredited delegates to the congress. Delegates and visitors intending to attend the congress are earnestly requested individually to notify immediately the same committee. This information is desired to facilitate registration, and to insure proper accommodation for the congress.

Members intending to participate in the public (subscription) dinner of the congress will please notify the secretary of the Committee on Entertainment, J. Ewing Mears, M. D., 1429 Walnut Street, Philadelphia.

Gentlemen intending to make communications upon scientific subjects, or to participate in any of the debates, will please notify the commission before the 15th of August.

MEDICAL NOTES.

— The Seashore Home for Children, formerly at Beverly Farms, has been moved to Plymouth, where the managers have secured the Clifford House and placed in charge one of the sisters from the Children's Hospital in Boston. Physicians desiring to send patients to the home may apply to Dr. Brown, 97 Waltham Street, or to Dr. Hastings, at the dispensary on Bennett Street. Dr. Edward T. Williams is the resident physician of the home.

— We have to record a death occurring during the administration of ether in the practice of Dr. A. D. Sinclair of this city. The patient, a young school teacher, had suffered for some time from dysmenorrhœa, for which incisions of the os were advised. The operation was performed on Wednesday, July 19th, ether having been administered by Dr. Vogel. The patient was placed upon the left side with the left arm behind her, as in Sim's position for a vaginal examination. The first steps of the operation had scarcely been completed when, to use Dr. Sinclair's expression, the patient suddenly died; we shall hope to obtain a detailed account of the case at an early day. It is hardly necessary to add that the unjust suspicions of foul play which have been thrown around this case have not been borne out by the testimony thus far given at the inquest at the time of writing, and have had no weight in the minds of the professional brethren of Dr. Sinclair.

— We understand that the gentlemen of the medical faculty of the Uni-

versity of New York express surprise and indignation at the statements of our New York correspondent last week, which they say are not in accordance with the facts. We have received no communication from them, but shall be glad to publish in our next issue any statement which they may wish to make.

— Dr. Whittaker has retired from the editorship of the Cincinnati *Clinic*, and Drs. L. R. Longworth and J. G. Hyndman are to conduct the journal in the future. A new monthly journal has appeared in Columbus, Ohio, the *Ohio Medical Record*. The editors are J. W. Hamilton, M. D., and J. F. Baldwin, M. D. This journal is the old *Ohio Medical and Surgical Journal* revived. The first number of the *Archives of Clinical Surgery* has recently appeared in New York, edited by Dr. Birmingham.

MASSACHUSETTS GENERAL HOSPITAL.

MEDICAL CASES OF S. L. ABBOT, M. D.

[REPORTED BY M. HUTCHINSON.]

Acute Rheumatism, with Valvular Lesions; Remarkable Character of Pulse; Salicylic Acid Treatment. — Willie T. C., aged seventeen years, slight built, somewhat emaciated, and looking not more than thirteen years old, entered the hospital on April 18, 1876. Reported himself to have had three previous attacks of acute rheumatism in 1873, 1874, and 1875 respectively.

Since the attack in 1874 has had marked and constant dyspnœa. On the 13th of April, having been at work as cash-boy, and having enjoyed pretty good general health during the winter, without known cause was seized with cramps and pains all over. The pain was so excruciating that previous to entrance he was obliged to inhale ether frequently, and for several nights could sleep only while under its influence. During severest paroxysms "was drawn up in a bunch." Pain is very severe in præcordia, throughout lower extremities, in left wrist, back of neck, and vesical region. Appetite poor. Constipated. Pulse 90. Temperature, evening, 101.9°.

Physical examination revealed impulse of heart forcible, with apex-beat one half inch below nipple; at apex the first sound muffled and prolonged, the second obscure; over base systolic and diastolic murmur distinctly heard, the diastolic being the louder; souffle more distinct than at apex; systolic souffle very loud under clavicle, the diastolic not being heard.

Over the upper and inner surface of both thighs the shock of the heart's systole is very perceptible to the touch and the impulse distinctly audible. The same signs were detected down even to the small arteries of the ankles and feet, and slightly in the left wrist.

Sinapism to cardiac region, five minims of liquid Dover's powder *pro re natâ* during the night, and six grains of salicylic acid pill every hour, were prescribed.

On the 20th, having had the anodyne but twice during the night, and having slept well, the patient was generally free from pain, except occasional par-

oxysms in the upper parts of thighs; was looking quite comfortable, and had a temperature of 98°.

On the 21st the salicylic acid was given every other hour.

On the 23d the patient was looking quite comfortable, and was allowed to sit up. The acid was given every three hours.

On the 26th the patient was up and dressed, having had no salicylic acid for the last thirty-six hours on account of nausea. Tongue clean, moist, and anæmic.

On the 28th had a return of three sharp, spasmodic attacks of pain in the left breast.

℞ Pil. acid. salicyl. gr. iii. every three hours.

On the 29th the patient reports himself as having had no pain since resumption of the acid.

From this time until the 5th of May the patient was up and about the ward, when there was a return of pain in both thighs, especially the right.

℞ Pil. acid. salicyl. gr. iii. every other hour.

Promptly on the next morning the patient was free from pain, and in a few days was playing about the yard.

The patient was discharged, well, on May 19th.

[*Remarks.* — This case presented some very remarkable features. The pulse in the left wrist, while the patient was in bed, was very strongly dichrotic, but not at all so in the right. After the patient was able to sit up, that of the right wrist became slightly dichrotic also, but much less so than that of the left. This dichrotism cannot be accounted for on the theory of the rebound of the blood-current from the aortic valves against a weak artery, as the lesion of the aortic valves was such as to allow a very free regurgitation into the left ventricle; the point of resistance from which the recoil took place, therefore, must have been the accumulating volume of blood in the ventricle. The dichrotism of the left pulse alone, while the patient was in a recumbent position, is explicable by the greater directness of the arterial current in the left than in the right arm; and the appearance of this symptom in a moderate degree on the right side, while the patient was sitting up, by the increased action of the heart in the erect, over that in the recumbent position.

The slackening of the aorta and its branches, owing to the great regurgitation through the aortic orifice, gives an explanation for another very peculiar symptom, the "visible" and audible pulse throughout the arteries of the extremities. The shock of the heart's contraction could be plainly felt by placing the hand on any part of the lower extremities, and over the arteries it was like the impulse communicated by a powerful machine. The expansion of the slack arteries under the excited action of a hypertrophied heart was such that the elasticity of the vessels could not come into play quick enough to ease off the shock which was transmitted as a sharp blow to the surrounding tissues. As has been stated, the throb of the arteries could be plainly seen down to the smallest arteries of the feet, constituting the "visible" pulse of Stokes.

Perhaps the most remarkable feature of all was the audible character of the pulse. The pulse could be heard as well as felt throughout the lower extrem-

ities, sounding like the stroke of a hammer everywhere, even in the soles of the feet; and at this distant point giving a double sound corresponding to the dichrotism of the pulse. These symptoms gradually diminished with the diminution of the heart's action during convalescence, but could be detected to some extent when the patient was discharged.

The action of salicylic acid in this case was most prompt and complete, giving almost immediate relief in a case of extreme severity. In less than a week from the beginning of treatment the patient was up and dressed, and was not obliged to return again to his bed during the day. — S. L. A.]

Acute Rheumatism; Treatment by Salicylic Acid; Prompt Relief. — Mary W., aged thirty-three years, washerwoman, entered the hospital May 8th. Has had several previous attacks of rheumatism, which came at intervals of about two years and had a duration of from four to eight weeks. Eight days previous to entrance, after exposure in hanging out a washing, she felt very cold and had chilly sensations, soon followed by pain in the back and in the thumbs. On the the next day the pain had extended into the feet and the ankles, and also into the knees. On the day of entrance the patient could move only the neck and the ring and little fingers of the left hand without pain. Had slight dyspnœa and considerable pain in the chest. Evening temperature 101.6°.

℞ Pil. acid. salicyl. gr. ix. every hour in two fluid ounces of milk.

The acid was given nearly every hour throughout the night. No sedative given. On the next morning reported herself as feeling quite comfortable, and "more easy than she expected to for a week." Little pain while at rest, but joints tender on pressure. Has occasional tinnitus, but no more than previous to entrance.

℞ Pil. acid. salicyl. gr. vi. every hour.

Temperature, morning, 99.4°; evening, 99°. Nothing abnormal detected about the heart.

May 10th. Comfortable. Temperature, morning, 98.3°; evening, 98.6°.

May 11th. Pain slight only on motion. Bears pressure on the knees without pain.

May 12th. Given six grains of salicylic acid pill every two hours.

May 21st. Given six grains of salicylic acid pill after meals.

May 23d. A general return of rheumatic pains.

May 24th. Given nine grains of salicylic acid pill every two hours.

May 26th. Up and dressed, feeling "quite nicely," and almost entirely free from pain.

May 31st. Discharged, well.

[*Remarks.* — This case is given mainly as an illustration of the promptness of the efficient action of salicylic acid in many cases of acute rheumatism. The patient was an expert in rheumatism, having had seven previous attacks, and was therefore very competent to estimate its comparative efficacy as contrasted with that of the remedies employed on previous occasions. The prompt reduction of the temperature will also be noticed. — S. L. A.]

Protracted Jaundice, with Severe Constitutional Symptoms, successfully Treated by Choleate of Soda.— S. S., surveyor, forty-nine years of age, entered the hospital May 8, 1876. Had intermittent fever twelve years ago, while in the army. For several years has been troubled with "biliousness." For the past fourteen months has had a severe, steady pain, described as an ache, referred to a spot midway between the sternum and the navel, extending over a surface the size of a hand, from side to side, which is not specially tender to the touch. This pain has occurred at intervals of two or three weeks. Has been constant now for the past four days. Last fall was confined to bed for about three months with utter prostration and weakness. Since that has been up and about, but unable to work. For the past four or five months has had chills and fever at intervals of two or three weeks. For about three months has had severe and troublesome itching of the skin all over the body, and the skin is now covered everywhere by marks of scratching. Bowels regular until within two weeks. Has not noticed color of discharges. Has noticed that he had less control over the act of micturition during the paroxysms of pain, and that the urine was dark colored at such times. Appetite good except at time of pain. Occasional regurgitation of sour and bitter water. Pain not increased by food. No bad taste in mouth. Complexion very sallow. Conjunctivæ very yellow. Abdomen flaccid, resonant, not sensitive to pressure. No abnormal hardness detected anywhere. Pulse 90, full and strong.

Examination of urine: yellow color; acid reaction; specific gravity 1021; considerable sediment; coloring matter increased; urea, chlorides, and phosphates normal; albumen, a trace; bile pigment present; hyaline casts with yellow granules.

℞ Acid. nitro-muriat. dil. ♏ xv. in sweetened water after meals.

May 10th. One dejection, said to be very light colored. Was kept awake by pain at epigastrium.

℞ Fl. ext. taraxaci, i. morning and night.

May 11th. Much itching of skin. Warm bath at night.

℞ Potass. bitart. ʒi. to be combined with the fluid extract of taraxacum.

May 13th. Comfortable. Itching much less.

May 15th. Distress at epigastrium much less than on entrance.

May 16th. Sleep disturbed by pain in bowels. Free from pain now. Some nausea. Four loose evacuations, somewhat darker in color. Omit all medicine to-day.

℞ Spts. ammoniæ aromat. ʒss, in an ounce of water, p. r. n.

May 17th. Nausea relieved. Comfortable to-day. Had chills at nine P. M., lasting two hours, and followed by fever of two hours' duration, with subsequent moderate sweating.

May 18th. Did not resume medicine on account of nausea. Slight return of itching.

May 19th. Frequent eructations of tasteless gas. Profuse night-sweats for two nights past. Omit the dilute nitro-muriatic acid.

℞ Sodæ bicarb. ʒss, p. r. n.

℞ Infusi salviæ at bedtime.

May 21st. Slept well. Slight sweating. Free from pain. Has not required soda. One dejection, darker than any yet.

May 25th. Profuse night-sweats. Some diarrhœa. Omit infusion of salviæ. Omit taraxacum and potassium.

℞ Zinci oxidi gr. vi. at night.

May 27th. Suffers from pain extending from hepatic region to right iliac fossa. No evident increase of hepatic dullness or tenderness. One dejection, lighter color.

℞ Solut. morphiæ 3 i. p. r. n. every half hour till relief.

May 28th. Relieved by one dose of morphia. Omit it. No night-sweats since taking oxide of zinc. Omit it. Resume bitartrate of potassium and taraxacum.

May 29th. At two P. M. had a severe chill of two hours' duration, followed by fever for three hours. A second chill at daylight, which was checked by blankets and heater.

May 31st. Excessively weak. Severe chill this morning. Omit all medicine.

℞ Pil. quiniæ sulph. gr. vi. to be given to-morrow morning if chill returns to-night.

June 1st. Hepatic region not tender on pressure. No enlargement of liver detected. Somewhat sensitive on deep pressure at a point two and one half inches above the navel, beneath which no hardness can be detected, and gas is felt moving freely. Resume bitartrate of potassium and taraxacum.

℞ Potassi iodidi	gr. i.
Tinct. gent. co.	ʒ ss.
Aquæ	ʒ i.

Three times daily.

June 2d. Chill this morning, lasting three hours, followed by fever.

℞ Pil. quiniæ sulph. gr. x. to-night.

Omit all other medicine to-day.

June 3d. No chill to-day. Feels better. Perspires freely. Some deafness and sense of constriction in head to-day. Resume taraxacum and bitartrate of potassium, morning and night.

℞ Pil. quiniæ sulph. gr. vi. every night.

June 4th. Free from pain. No chill, but a slight amount of fever this morning.

℞ Pil. sodæ choleat. gr. v. morning and night.

June 7th. Slept well until four A. M., when he had a slight chill lasting two hours. Complains most of weakness. Increase the choleate of soda pill to ten grains.

June 8th. Slept well and feels stronger. One dejection of quite dark color. Omit quinine.

June 10th. One natural dejection.

June 12th. Omit bitartrate of potassium and taraxacum.

June 14th. Complexion now perceptibly lighter.

June 17th. Gaining rapidly in strength. Two dejections, very dark colored.

June 22d. Looking still lighter in complexion. Discharged, well.

[*Remarks.* — This patient has been heard from since he left the hospital, and his improvement continues. This was only moderate and fluctuating until he began the use of choleate of soda. Its use in this case was in some

sense empirical, being based upon its known power as a solvent of gall-stones. No gall-stones have ever been found or supposed to exist in the present case, but it was thought possible that an obstruction of the gall-ducts by inspissated bile, or some bile product, might be the cause of the jaundice and be removed by such a solvent, and it was accordingly tried. The patient improved in every way from the moment it was employed. The jaundice rapidly diminished, the stools resumed their natural color, the urine became clear, the distressing attacks of abdominal pain, the very exhausting chills and fever, and the excessive itching, all disappeared. At the last accounts the patient was gaining strength rapidly, and apparently was nearly well of a disabling affection which had lasted fifteen months. — S. L. A.]

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 15, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	1298	63.67
Philadelphia	825,000	854	53.83
Brooklyn	506,223	533	54.77
Chicago	420,000	263	32.56
Boston	375,000	194	26.63
Providence	101,000	52	26.77
Worcester	50,000	22	23.20
Lowell	50,000	41	42.91
Cambridge	48,000	16	17.33
Fall River	45,000	33	38.15
Lawrence	35,000	23	34.17
Lynn	33,000	18	29.25
Springfield	31,000		
Salem	26,000	10	20.00

Normal Death-Rate, 17 per 1000.

Books and Pamphlets Received. — Illustrations of Clinical Surgery, consisting of Plates, Photographs, Wood-Cuts, Diagrams, etc. With Descriptive Letter-Press by Jonathan Hutchinson, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1876.

A Practical Treatise on Diseases of the Eye. By Robert Brudenell Carter, F. R. C. S. With One Hundred and Twenty-Four Illustrations. Edited, with Additions and Test Types, by John Green, M. D. Philadelphia: Henry C. Lea. 1876.

A People without Consumption, and some Account of their Country, the Cumberland Table-Land. By E. M. Wight, M. D. Reprinted from the Transactions of the Medical Society of the State of Tennessee, April, 1876.

Some Disputed Points in Physiological Optics. By Henry Hartshorne. (Read before the American Philosophical Society, April 21, 1876.)

The Cause of Rotation in Lateral Curvature of the Spine. By A. B. Judson, A. M., M. D. (Reprinted from the Transactions of the New York Academy of Medicine.) 1876.

Report of Committee on State Board of Heath, made to the Medical Society of Tennessee, April, 1876.

Archives of Clinical Surgery, a Monthly Periodical devoted to Surgery in all its Special Departments. Edited by Edward J. Birmingham, M. D. Vol. I. No. 1. New York: Routledge & Co.

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THE BOSTON
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THE CREPITANT RALE: ITS NATURE AND CONDITIONS OF PRODUCTION.[1]

BY W. H. WORKMAN, M. D., OF WORCESTER.

From the time of the introduction into medical science of physical examination of the chest, the crepitant râle has been considered one of the most important and interesting of auscultatory signs, and its nature and causation have furnished an ever-fruitful theme for speculation. Of the various hypotheses put forth to explain this phenomenon, the two which have obtained an especial prominence are, first, that proposed by Laennec and adopted by Skoda, Barth and Roger, Andral, and others, which ascribes the râle to the bursting of small bubbles created by the passage of air through liquids contained in the air vesicles; and, secondly, that advocated by Carr, Wintrich, and Parrot, which refers the sound to the sudden separation of the vesicular walls during inspiration, these having been closely applied to one another during expiration. This hypothesis has of late years steadily gained in favor with the profession, although no very satisfactory explanation could be given of the manner in which the alveolar walls might be brought in contact during expiration. It was not until the recent experiments of Cornil and Grancher upon the cadaver that the truth of this was placed beyond question, and also direct evidence obtained of the *modus operandi* of the forces involved. Without occupying time in discussing ideas now exploded, allow me to call your attention as briefly as possible to the facts bearing upon the ætiology of this râle, and the conclusions to be drawn from them.

By the crepitant râle is generally understood the fine, dry, crackling sound, resembling that produced by rubbing a lock of hair between the fingers near the ear, which is heard under certain circumstances upon auscultation of the chest. It occurs in little puffs or blasts, is not dissipated by coughing, but rendered more distinct by this act, and is perceived only during or at the end of inspiration. This last peculiarity distinguishes it with certainty from the only two auscultatory sounds with which it is liable to be confounded, namely, the subcrepitant râle,

[1] Read before the Massachusetts Medical Society, June 13, 1876

and a certain variety of friction-sound, both of which are heard not only on inspiration, but also on expiration.

As regards the anatomy of the lung, it is only necessary to premise that the delicate connective-tissue septa between and inclosing the air vesicles are richly provided with elastic fibres, which pass thence along the bronchial walls to the root of the organ, tending to draw all parts inward upon this point when the expanding force is removed.

If artificial respiration be made upon a cadaver in which the lungs are free from disease, care first being taken to clear the trachea of any mucus or liquid which may have accumulated therein, the respiratory sounds will be found to be the same as in health. If the walls of the chest, including the parietal pleura, be then removed and the lung laid bare, it is seen to collapse in virtue of its elasticity, aided by the atmospheric pressure from without. Artificial respiration being again resorted to, and auscultation practiced with the ear placed near the lung or with the stethoscope, a new sound is heard which could not be detected while the parietes of the chest were intact. After a certain quantity of air has entered the lung, a fine, dry crepitus is perceived, which, although perhaps somewhat finer and dryer, is otherwise identical in character with the crepitant râle. This continues to the end of inspiration and then ceases. It is not heard in expiration, but reappears with each succeeding inspiratory movement. Cornil applies the name vesicular crepitation to this sound.

It is a well-known fact that in health the lung always contains a certain quantity of residual air, which, in the absence of external pressure, serves to counterbalance the elastic contractility of the lung, so that the alveolar walls, although approaching one another somewhat, do not come in contact in expiration. In inspiration no vesicular crepitation can be heard. The same holds true of the cadaver with healthy lungs and intact thoracic walls. So soon, however, as the pleural cavity is opened and the lung exposed to the pressure of the external air, the pulmonary tissue contracts strongly and expels the residual air to such a degree that the alveoli[1] are effaced and their septa applied closely to one another. The latter are then separated suddenly by the entrance of the air on inspiration, giving rise in each alveolus to a fine explosion, which, being reinforced by similar ones in the neighboring alveoli, occasions the fine crackling peculiar to the vesicular crepitation. Hence the production of this sound in the experiment cited depends on two conditions: first, the abolition of the vesicular spaces and contact of the vesicular walls during expiration; and, second, the sudden restoration of the same to their former state by the penetration of the air during inspiration.

[1] Whatever is said of the alveoli and vesicular spaces must be understood to apply with equal truth to the infundibula, into which they open. The terminal bronchioles are probably also concerned in the production of the crepitant râle, though this has not been proved.

Here the first condition is induced by the internal elastic traction aided by the external atmospheric pressure. That the same effect may be caused by intra-thoracic pressure upon the pulmonary tissue will be seen as we proceed. The action of the second condition is well illustrated by the simple experiment proposed by Carr, which consists in pressing firmly together near the ear the thumb and forefinger moistened with some viscid substance and then separating them.

Physiology furnishes two familiar examples of vesicular crepitation, or, as it might with propriety be called, the crepitant râle. When a person during illness or in the sleeping state has for some time lain quiet upon his back, if the first long inspiration thereafter be ausculted, the vesicular crepitation is perceived, ceasing in the following inspirations. Here the quietness of the respiration, the weight of the pulmonary tissue, and the immobility of the dorsal portion of the thoracic walls, have caused the collapse of a greater or less number of peripheral alveoli, which expand again in the first full inspiration.

In the new-born infant, auscultation of the first few inspirations by which the hitherto atelectatic lungs are aerated, discovers most strikingly the vesicular crepitation.

In 1872–73, a series of experiments upon the cadaver were performed by Cornil and Grancher in Paris, with a view to determining the causes of the various normal and abnormal respiratory sounds. Of these the two following have an important bearing upon our subject.

In the first experiment a cadaver with healthy lungs was procured, and fifty to one hundred grammes of melted tallow injected into the pulmonary tissue by means of a syringe provided with a small trocar, which was introduced through one of the intercostal spaces in such a way that no air from without was allowed to enter. Care was also taken that the tallow should not penetrate and fill the bronchi, and thus obstruct the passage of the air through them. In this manner a nodule in the lung was formed, solid and impermeable to air. Auscultation over and in the neighborhood of this nodule during artificial respiration revealed plainly, on inspiration, the vesicular crepitation. If the respiration was made slowly, allowing the lung time to retract upon itself, the crepitation was found to be permanent, occurring during each succeeding inspiration or just at its end. The nearer the surface of the lungs the tallow was injected the more clearly could the crepitation be heard, and if the nodule was large it was perceived more distinctly at the circumference than at the centre. The parietes were now removed, and the situation of the indurated mass was found to correspond with the crepitation observed. Auscultation of the uncovered lung showed a similar though still more marked result. In order to assure themselves that the crepitus was not formed in the indurated portion, the latter was divided with a knife, and the inclosed bronchioles, infundibula, and alveoli, seen to be entirely filled with the injection.

In the second experiment the tallow, instead of being injected into the lung, was introduced without wounding that organ into the pleural cavity, forming a hard mass spread out between the lung and the walls of the chest. The crepitation was heard as in the first experiment, over and around the circumference of the injected tallow. The inserting of bits of wood into the fissure between the lobes was found to have the same effect.

The explanation of the phenomenon was as follows. The alveoli and infundibula, dilated and filled with the tallow, form a solid mass within the chest, which occupies the same space during expiration as during inspiration. This is not the case with a similar amount of lung tissue, which diminishes considerably in volume in expiration. Hence, in expiration, pressure is exercised upon the alveoli surrounding the nodule and their cavities are effaced. The succeeding inspiration restores them to their former condition with the production of the crepitus.

Thus it is seen that, in the normal lung, a crepitation can be produced identical in character with the crepitant râle, and like it heard only during or at the end of inspiration; that this sound depends on physical causes, inducing by pressure applied in various ways obliteration of the alveoli during expiration, and permitting the restoration of the same during inspiration.

These facts having been noticed, it remains to consider the diseases in the course of which the crepitant râle occurs. Such are croupous pneumonia, chronic catarrhal, interstitial, and broncho-pneumonia, tuberculosis, hæmorrhagic infarction, pleuritis, tumors, gangrene. Although the pathological processes in the group indicated are so diverse, yet the same final physical result is attained in all, namely, the formation within the lung or at its surface of a body impermeable to air, and comparatively incompressible, surrounded or bordered by a tissue either normal or so little changed as to be capable of aeration. This state of things will be seen at a glance to be the physical counterpart of that which may be artificially induced, and which, when so induced, gives rise to the vesicular crepitation. We are therefore warranted in assuming the same mode of production for the crepitant râle, the more especially since the latter is absent in those diseases unfavorable to the development of the above conditions. Clinical and pathological observation furnish proof of the truth of this assumption.

In croupous pneumonia, the best authorities tell us, it is not in the first stage, or stage of congestion, that the crepitant râle manifests itself. It is only after exudation has commenced, and groups of alveoli over a space more or less extended have become solidified, as evidenced by dullness and modified respiration. While the solidified portion is yet small, the râle is heard over it or in its immediate vicinity; but as the former increases in extent the latter changes its seat, being per-

ceived only at the circumference or edge bordered by normal tissue. As the exudation at any point becomes complete, the râle at that point is replaced by bronchial respiration. When a whole lobe is rendered solid, the crepitus can be detected only along the line bordering the adjacent unaffected lobe.

The congested condition of the zone of tissue immediately around the indurated part cannot be said to have any direct influence in causing the crepitant râle, since the latter does not occur in simple congestion, or in the congestive stage of pneumonia, and the vesicular crepitation is produced without the presence of any congestion whatever. Probably, however, the slight thickening of the vesicular walls incident to congestion favors the râle indirectly by compromising somewhat the vesicular spaces, thus rendering them more easily effaceable, and also serves to make it rather less fine and dry than the pure vesicular crepitation.

Clinical experience shows what would naturally be inferred from what has been said, namely, that the crepitant râle may persist till convalescence is quite far advanced. As the exudation softens and is removed by expectoration and absorption, the tissues again become accessible to the air, and again subject during expiration to compression by the yet solidified portions. Hence the persistence of the râle and its reappearance in places where it had been replaced by bronchial respiration. But in general the so-called râle crepitans redux of the resolving stage of pneumonia is a subcrepitant râle, heard with both acts of respiration, and due to the action of the air on the liquids contained in the smaller bronchi.

In the pathological changes called broncho-pneumonia, chronic catarrhal pneumonia, interstitial pneumonia, and tubercle, which separately or combined are found in the lung in the disease known as phthisis, if the chest be ausculted in the neighborhood of the indurated foci, provided these be situated sufficiently near the surface of the lung, fine, dry crepitant râles may be perceived. It is seldom that they are heard with the sudden sharp explosion so characteristic in croupous pneumonia, for the reason that the diseased areas are often so small, and shade off so gradually into the healthy tissues, that less opportunity is afforded for the effacement of the alveoli and the sudden restoration of the same. Under these circumstances the râles are usually more or less scattered, and so frequently associated with other sounds of more striking character, that their existence is likely to escape attention if care be not exercised.

Theoretically, hæmorrhagic infarction fulfills better perhaps than any other morbid process the conditions obtaining in the first experiment above quoted. Here a circumscribed nodule of greater or less extent, with sharply defined periphery, exists, solid, inelastic, and immediately

surrounded by tissue, which, though congested, admits air freely. This case, minus the congestion, is exactly parallel with that of the suet injected into the substance of the lungs. As might be expected, crepitant râles are heard on auscultation, persisting a longer or shorter time, according to the further changes occurring in and around the infarction. When followed neither by abscess nor gangrene, the râles have been heard for days and weeks.

The second experiment in which the suet was introduced into the pleura finds its pathological analogue in pleuritis, the compressing force in both the cases being exterior to the lung. It is only, however, in the last stages of this disease, when the pain which interferes with full inspiration has passed away and the effusion has been mostly absorbed, that the crepitant râle is usually perceived. In this case the moderate remaining exudation or the false membranes covering the pleural surfaces serve in expiration to compromise the peripheral alveoli, which are restored by full inspiration with the production of a well-marked crepitant râle. Various authors who have recognized this have ascribed it to the friction of the pleural surfaces, but as it occurs only during inspiration such a view is untenable.

In gangrene of the lung the existence of the crepitant râle must be referred rather to the influence of the preceding and accompanying indurative processes, such as acute or chronic pneumonia, hæmorrhagic or metastatic infarction, tubercle, etc., than to that of the disorganized portions. Where the gangrene results from certain influences causing direct softening of the tissues, it is doubtful if the râle could be perceived.

As regards tumors of the lungs, it is only necessary to say that they are known to give rise to unmistakable crepitant râles, and if there be several tumors in the lungs at the same time the râles will be heard in the corresponding situations.

To recapitulate. The crepitant râle has its seat in the alveoli and infundibula, and possibly also in the ultimate bronchioles, the walls of which have the same structure as those of the air-vesicles. It does not occur in the diseased parts, but in those immediately around remaining nearly or quite healthy. Its origin is purely physical, and is due, first, to compression from without, and, secondly, to expansion from within. The compression is produced by adjacent indurations resulting from disease. It makes no difference what the pathological process may be, provided an induration be formed in or at the surface of the lung in such a manner as to give rise to the two above-named conditions in a spot favorable to perception by the ear. Hence, the crepitant râle is peculiar to no one disease, as was formerly supposed, but may exist in several, each having its distinct pathological nature.

PURULENT CATARRH OF THE EAR.[1]

BY JAMES A. SPALDING, M. D. HARV.

Acute purulent catarrh of the ear in adults may arise from a variety of causes, during the course of a chronic catarrh, or from exposure of the ears in various ways to the action of cold. In children, it occurs more frequently during the course of, or as one of the sequelæ to, the exanthematous diseases. Some authors have considered its presence as the cause of infantile convulsions. I have been unable to find much attention drawn to this point in any of the more recent works on the diseases of children, and even the well-known presence of purulent catarrh, during and after exanthematous diseases, is for the most part passed over slurringly. Von Tröltsch, one of the greatest German authorities on diseases of the ear, mentions the result of a large number of pathological examinations of the ears of infants under one year of age, where he found in the tympanum and its neighborhood varying amounts of degenerated, cheesy, purulent deposits, which could have resulted in no other way than from an acute purulent catarrh of the ear. My idea in bringing this subject before you, especially in infantile cases, is to speak a few words as to the diagnosis. The great diagnostic symptom in infants suffering from an acute purulent catarrh of the ear in which there has been no flow of purulent matter from the external meatus, owing to the shortness of the Eustachian tube, which lets the pus flow off more easily than in adults, is the cry, which is distinguished from that present in diseases of the lungs, pleura, or larynx, in that in these latter affections the child can hardly ever cry aloud, and still less keep up a continuous cry. In acute purulent catarrh of the ear, in infants, this cry is continuous, loud, piercing, increasing with every motion and shaking of the body, and especially of the head, by every change of position, at every effort to swallow, and above all, at all attempts at nursing.

If in this way the attention of the physician is drawn to the ear, an objective examination may be now made, and if the diagnosis is confirmed, appropriate treatment may be resorted to.

In acute purulent catarrh in children and adults, the symptoms are more or less the same: intense and deep-seated pain in the ear, increasing with every motion of the body or head; deafness is present in greater or less degree; during the exanthematous diseases the pain is usually less than in an idiopathic case. There may be sooner or later a discharge from the ear.

The treatment is usually simple, and should be energetically employed, to prevent if possible either permanent deafness, from thicken-

[1] Read before the Cumberland County Medical Society, Portland, Me., March 29, 1876.

ing or perforation of the membrana tympani, or the bad results of a chronic purulent catarrh, with all its possible dangers and disagreeableness, as well as to relieve the patient as soon as possible from the agonizing pain.

The patient should be kept as quiet as possible, warm water should be frequently syringed or dropped gently into the meatus, warm poultices may be laid behind the ear, and one or two leeches may be placed in front of the tragus or below the ear, as from the relations of the vessels they will there sooner be able to relieve the congestion of the inflamed parts. It is sometimes advisable to plug the meatus with wool, to prevent the blood running in, or the accident of the leech itself crawling in. Morphia is often borne in large doses; but it should be remembered that it only quiets the pain, and does not remove the cause, nor bring speedier relief. If in the course of a few hours relief is not obtained, then there remain, as further steps of treatment, scarification, or even perforation of the membrana tympani; and this latter step is advisable if the presence of pus be detected behind the membrane. These operations can be performed with a common needle such as is used for paracentesis of the cornea, but still better with a needle made for the purpose, with a bend in the shank, which does not prevent the surgeon's seeing what he is doing. The object in scarification is to relieve the over-loaded blood-vessels, while in perforation we endeavor to hasten the removal of pus already seeking its way out from the tympanum. As a result of such treatment, many a case of acute purulent catarrh can be speedily relieved, and great damage prevented.

It is an indisputable fact that in no other part of the body would such a state of things as accompanies a chronic purulent discharge from the ears be allowed to remain for years untouched. It is a well-founded surgical rule that all deposits of pus elsewhere in the body should at once be removed, or attempts made in that direction. But in the ear, which lies as it were in contact with the brain, an accumulation of pus, or muco-pus, is allowed to remain for years, without any determined effort being made toward its removal, or to heal the causes which lead to it, and keep it a permanent drain upon the system.

Brief mention may be here made of the anatomy of the tympanum within or near which this pus is allowed to remain. Its floor lies just over the jugular vein, separated from it by an oftentimes transparent layer of bone; near by lies the internal carotid artery. Its ceiling, which also is not seldom thinned or even sieve-like, touches the dura mater, and the superior petrosal sinus. The inner or labyrinthine wall, offers but slight resistance to the encroachment of any inflammatory process, first upon the facial nerve, and second on the inner ear. Last of all we find, lying close to the tympanic cavity, the mastoid process of the temporal bone, with its net-work of cells, and the sinus transversus which lies directly behind it.

A chronic purulent catarrh of the ear is easily enough recognized by the continual presence of a discharge from the meatus, often offensive to the patient and those around him. Deafness is also present to a greater or less extent. The most common cause is a neglected case of acute purulent catarrh, either idiopathic, or, as is more frequent, as a sequel to various exanthematous diseases.

The first thing to be done, when such a case presents itself, is to cleanse thoroughly the meatus with warm water, so that the condition of the parts, which is often greatly altered by the presence of a long-standing discharge, can be accurately made out. The most common objective symptom is a perforation of the membrana tympani, which may vary from an almost invisible slit to entire absence of the membrane. The deafness will vary according to the size of the perforation, there being usually much better hearing with a large than with a small perforation, provided of course that some part of the membrane is still left standing, holding the bones of the ear *in situ*. Beyond the perforation, if it be large enough, can be seen the red and swollen mucous membrane of the promontorium, sometimes marked with raspberry-like granulations.

It is of prime importance to bring the mucous membrane to a healthy condition, if we would afterward heal the perforated membrane. Having carefully cleansed the meatus with warm water, it is then to be dried with cotton wool rolled round the end of the probe, always looking where the cleansing is being done, so that the bones of the ear, if still present, may not be broken or dislocated, thus causing oftentimes incurable deafness. This wad of wool should be very small, so as not to interfere with the view. Solutions, of varying strength, of nitrate of silver, from ten grains to the ounce of water to thirty grains, or even to a saturated solution if granulations be present, are then to be thoroughly applied with the same cotton pointed probe as during cleansing. Oftentimes the discharge is kept up by one small granulation, while the rest of the mucous membrane is in a comparatively healthy state. In such a case it can be easily seen how bad it would be to apply a strong solution of silver all over the mucous surface, and this is why I advise that we should always see what we are doing and not apply strong solutions indiscriminately. There is also another plan for bringing the mucous membrane to a healthy state, and this is to force warm astringent or alkaline solutions through the ear and Eustachian tube from without, by means of a syringe with a nozzle which fits air-tight into the external meatus. The patient holding his head down and to one side, the fluid runs out of the nostril. We must, of course, before using this method, first assure ourselves that the Eustachian tube is open. This procedure sometimes causes dizziness, which however lasts but a short time; still it is well worthy of trial in obstinate cases, as the seat of the discharge may be in a part of the tympanum inaccessible to touch.

During the intervals of treatment by the surgeon, the patient is to use as an ear lotion a solution of sulpho-carbolate of zinc, ten grains to the ounce of water, or sulphate of zinc, of the same strength, with a few drops of a solution of carbolic acid or liquor opii added. Various other astringents may be tried. It is well that all lotions should be made of double strength, so that when used they can be diluted with one half warm water, which makes them more agreeable to the patient and less dangerous.

The edges of the perforation in the membrana tympani may also be cautiously touched with solid nitrate of silver, applied with a fine probe; but I think it will be usually found that the edges of the perforation show tendency to heal when the mucous membrane of the tympanum becomes more healthy under careful treatment.

Let us suppose that as a result of such treatment as has been suggested, the discharge has at last stopped, and the edges of the perforation have reached a pretty healthy state. Considerable deafness may still be present. With the decrease of the discharge, there may be at first a decrease in hearing, but this will gradually disappear. But if we wish to try to increase the hearing at once, we may resort to the artificial drum, or to the plug of cotton wool, or we may try the effect of a piece of common note paper, cut out to the required shape, and gently placed over the perforation. With the first two methods, the patient is usually the best operator, for he can adjust the artificial drum or plug of cotton wool to best suit his hearing, while with the paper, the surgeon can best succeed. Either of these three methods may often bring about a marked increase of hearing, but it is well to be cautious about promising too much for the patient.

As was remarked before, the mastoid cells lie directly in contact with the tympanum, and it may happen that pus finds its way into them, especially when its passage outward is prevented by polypi in the meatus, or downward by occlusion of the Eustachian tube. If pus makes its way into the cells, it makes its presence known by redness, swelling, and tenderness over the mastoid region. It may make its own way outward and have a fistula, often obstinate to treatment, as the pus may burrow in all directions. If the presence of pus be suspected, a free incision, about an inch behind where the auricle joins the bone, should be made at once down through the periosteum, and from below upward, so that the knife if it slip may not wound the large vessels of the neck; and in very acute cases the bone itself should be carefully broken into by a gouge or chisel, or especially invented trepan. By keeping the incision well open, and now and then forcing warm alkaline or astringent solutions through the meatus, a greater portion of which will make its way outward through the broken-down cells, we may succeed after long and careful treatment in bringing about a healthy state of the parts involved.

The death-record and autopsy list of many a hospital show a large number of fatal cases due to the presence of pus in the mastoid cells, and its extension to the brain and its membranes. Passing by any detailed list of all the various cerebral troubles, as abscess, meningitis, and so on, which have thus been caused, brief mention may be made of facial paralysis, caused by a lesion of the facial nerve, as it passes through the Fallopian aqueduct, separated by a very thin plate of bone from the tympanum, in which there is a deposit of pus. Facial paralysis thus caused is more likely to be lasting than when due to other causes. The surgeon may here find himself at fault in his prognosis if he has overlooked the fact that a purulent deposit in the tympanum may be the cause of the lesion. We in such cases resort to constitutional treatment, but any purulent discharge from the ears must be especially treated before we can hope for lasting benefit.

Finally, we come to the most common accompaniment of a chronic, purulent discharge from the ear, one which is as it were at the same time effect and cause, — polypus of the meatus. On examining the meatus, its passage is seen to be more or less blocked up by a fleshy growth, which may be diagnosed from inflamed mucous membrane, by being movable by the probe. A polypus may be large or small, superficial or deep-seated. From its surface there is ever extending purulent matter, and the very presence of the growth not only keeps up the discharge from the meatus, but may lead to dangerous results by preventing its exit. If a polypus has a small base, or is pedunculated, also if it be superficially seated, it may be removed bit by bit, or even *en masse*, by snares, which we may do successfully if the meatus be large and roomy; but if the meatus be narrow, or if the polypus be deep-seated and with a broad base, then we must resort to the slower process of cauterization. Good success in this direction is attainable with solid nitrate of silver, but other caustics may in turn be tried. Whatever caustic is used, it is to be applied freely all over the exposed surface of the polypus, avoiding as much as possible any cauterization of the dermoid layer of the meatus. The caustic may be applied every other or every third day. Under its action a polypus often seems to melt away. If much pain ensue, it may be relieved by warm water. After the polypus has been entirely removed, its base must still be thoroughly cauterized, especially as in some cases there is a tendency to recur. There is no positive certainty, as to our prognosis, either as to the perfect removal of a polypus, or as to increase of hearing. A majority of cases, however, yield to careful treatment, and the hearing is oftentimes greatly improved.

In summing up the whole subject which we have now under consideration, it can be truly said that by energetic treatment of acute purulent catarrh of the ear we may often succeed in preventing any con-

siderable lesion of the parts concerned in hearing, as well as the possibility of a future chronic catarrh; that the discharge due to chronic purulent catarrh can be rendered much less in amount or even entirely removed; that deafness due to such discharge can be much diminished; and that the stoppage of the discharge not only has not, as is almost universally supposed, a harmful effect on the system, but that on the contrary the general health of the patient can be and is thereby greatly improved.

I am informed that some of the more conservative life assurance companies, not only in England, but in this country, refuse to consider an applicant with a chronic purulent discharge from the ear as a safe risk.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.

BY D. H. HAYDEN, M. D.

Diphtheria.[1] — The author[2] reports the results of his experience during an epidemic of this disease in Tunis. He classifies the disease into a mild form, a form with abortive infection, a severe form, and finally a hypertoxic form; *i. e.*, when the general infection is so rapid that one is led to the conclusion that the general infection is the primary stage, and the disease of the pharynx the secondary, while the author, however, for all cases asserts the opposite. A very important guide for determining the severity of the disease is the amount of albumen in the urine, and the condition of the glands of the neck as to swelling. Of the sixty-four cases treated by the author, only two had paralysis as a sequel.

The author does not use any prophylactic treatment. He advises the parents only to examine daily the pharynxes of their children, in order, if necessary, to obtain the immediate attendance of their physician. The use of caustics is condemned, and locally and internally, partly carbolic acid, partly salts of sulphurous acid are used.

Of late the author has used with satisfactory results chloral hydrate dissolved in glycerine.

G. Calimani,[3] since 1873, has had under treatment two hundred cases of diphtheria, and notwithstanding the employment of old and new remedies, amongst others salicylic acid, has lost one hundred and fifteen cases. Twice consecutive paralysis was observed, which rapidly recovered. In five cases, young girls, there was gangrene of the vulva, and in one case purpura hæmorrhagica. A complication never before

[1] Centralblatt für Chirurgie, No. 14, 1876. G. Ferrini. G. Calimani.
[2] Annali univ. di Medic. e Chir. Maggio, 1875.
[3] Gazz. Medica Ital. Lombardia, No. 52, 1875.

reported was noticed in fifty cases, namely, a peculiar disease of the last phalanx of the great toe, rarely of any other toe, and still more rarely of the left middle finger. A few days before the diphtheria made its appearance (probably in the prodromal stage) the last phalanx of the toe becomes red, later blue, and from the border of the nail there exudes a yellowish, offensive secretion. The nail itself was covered with a layer of yellowish-gray, shining matter. This affection, which might be called gangrene, becomes worse with the appearance of the diphtheria, until on the third or fourth day the patient dies. Of the fifty cases affected with this complication, not one recovered. These facts strengthen the opinion of those who consider diphtheria to be an epidemic, contagious, general disease.

Treatment of Diphtheria.[1] — In January of this year, in a very desperate case of diphtheria, after permission for tracheotomy was refused, the author tried a mixture of salicylic acid and lime-water (2 : 200). With this solution, which by the bye was perfectly clear, the throat was painted, and at the same time a dessert-spoonful of the same with an equal amount of milk was given internally every hour or half hour. After a few hours a membranous mass was coughed up, the breathing became easier, the swallowing also, and in two to three days recovery was complete.

Since, during an epidemic, without regard to what may be the chemical composition of this mixture, he has used it in the treatment of several cases. With older children it is used as a gargle; with smaller children, when obstacles to painting the throat are met with, it is given internally to be swallowed slowly.

In the author's ten years of practice he has never been so successful with any other mode of treatment, for in a large number of severe cases treated in this way he lost but one, and this fatal case was that of a child to whom it was impossible to administer the remedy in any manner.

The author proposes at a future period to give the cases in detail for publication.

The Internal Administration of Salicylic Acid in Diphtheria. — Four months before the publication of the therapeutical effects of this remedy in acute rheumatism, Dr. Julius Steinitz had employed salicylic acid in forty-five cases of diphtheria, thirty-four of which complicated scarlet fever, and eleven were idiopathic diphtheria. The medicine was given in powder form 0.1–0.12–0.2 gramme, to be taken in sweetened water every one or two hours. Taken in this way, a small quantity is left behind in the glass, and this residue is easily taken up by the subsequent mixture of a little sweetened water with it. The cases were for

[1] Allgemeine med. Central-Zeitung, April 26, 1876, No. 34. Dr. Tenholt (Burgsteinfurt).

the most part severe ones as to the diphtheritic symptoms, and the fever high. In all cases the medicine was well tolerated. In a few isolated cases slight vomiting was excited by the first dose, which did not recur, however, with subsequent doses. As a rule, ten to twelve doses sufficed to remove the fever, and, with this number of doses, the diphtheritic process nearly always began to decline. A continuation of the remedy for a few days, given at greater intervals, effected a perfect cure. Of the forty-five cases thus treated, only two died of diphtheria, and one of the sequelæ of the disease. There were no injurious effects upon the digestive tube. The author has found that salicylic acid is best tolerated when given in this simple form. When prescribed in the form of solutions made up with other substances it often does not agree, and the corrigenda added serve to make it taste worse than otherwise. Salicylic acid has no influence on the sequelæ of the disease.

Extractum Castaneæ Vescæ e Foliis as a Remedy for Whooping-Cough.[1] — From a series of experiments with this remedy the author comes to the conclusion that the above extract is useful if in the first days of the disease the number of paroxysms does not increase or does not exceed twenty, when the catarrhal symptoms are moderate, and with patients that are anæmic. It is of no effect if the number of paroxysms exceed twenty pro die, when the bronchitis is severe, where there is broncho-pneumonia and alveolar atelectasis, or when there is swelling of the bronchial and mediastinal glands.

To infants up to one and a half years he prescribes: —

℞ Ext. cast. vescæ fluid.
Syrup. mannat. . . . . ää 25
S. Teaspoonful every three hours.

For older children: —

℞ Ext. cast. vescæ fluid. 40
Syrup. mannat. 20
S. One teaspoonful every three hours.

The Quantity of Breast Milk consumed by Sucklings.[2] — M. Snitkin reports a long series of observations made during three years upon children of various constitutions from one day to a month old, given in tables arranged with great care and accuracy. The quantity of milk consumed was determined by the weight of the child just before and after nursing, and cases were placed under observation only when perfect reliability was assured. The sex had no influence on the amount of milk consumed.

The number of children under observation was 225, weighing from 1200 to 4500 grammes (about 3½ to 9½ pounds); the weight was determined in all 11,709 times.

[1] Oesterreich. Jahrb. f. Pädiatrik, 1875. Deutsche Med. Wochenschrift, No. 15, 1876. Allg. med. Central-Zeitung, April 26, 1876, No. 33.

[2] Jahresbericht des Kaiserl. St. Petersburger Findelhauses. St. Petersburger med. Wochenschrift, No. 10, 1876. Allg. med. Central-Zeitung, No. 27, April 1, 1876.

From the tables can be seen that with every day that the child becomes older and heavier, the quantity of milk taken at one time becomes greater. The smallest amount was 10 grammes (2½ drachms), the largest (twice) 150 grammes (five ounces). The amount 2276 times was 30 grammes (one ounce).

The amount with various nurses was generally with children that weighed

2000 to 2500 grammes (4⅜ to 5½ pounds), 20 grammes (5 drachms).
2500 to 3000 grammes (5½ to 6⅝ pounds), 20 to 30 grammes (5 drachms to one ounce).
3000 to 3500 grammes (6⅝ to 7¾ pounds), 30 grammes (1 ounce).
3500 to 4500 grammes (7¾ to 9⅞ pounds), 50 grammes (1⅞ ounce).

During the first days 85.7 per cent. decreased in weight and were able to consume only 10 to 20 grammes (2½ to 5 drachms), which the author explains by the fact that most of the children were brought into the Foundling Asylum a few days after birth in a most wretched condition. If the infants had at one time consumed 90 to 100 grammes (3 to 3½ ounces), when placed the next time on the breast they were only able to consume 10 to 20 grammes (2½ to 5 drachms). Infants from 2000 to 2500 grammes weight (4⅜ to 5½ pounds) take rarely a very small quantity; infants from 4000 to 4500 grammes weight (8⅓ to 9⅞ pounds) rarely very large quantities at one time.

There were 4059 observations made on 70 good suckling infants with strong healthy nurses. The average amount of milk consumed at each nursing with infants from 2000 to 4500 grammes weight (4⅜ to 9⅞ pounds) was 50 grammes (1⅔ ounces). As a rule, infants consume at one nursing in the first third of the month $\frac{1}{10}$ pound; in the second third, ⅛ pound; in the third third, ⅐ pound. Infants from 4000 to 4500 grammes in the first third, ⅛ pound; in the second and third third, ⅐ pounds.

The conclusions drawn by the author are that an infant on the first day must obtain at each nursing $\frac{1}{100}$ of his weight, and each following day one gramme more. If we reckon 10 to 12 nursings daily, on the second day it will receive 368.5 grammes (12¼ ounces), on the third 379.5 grammes (12⅔ ounces), etc.

Primary Carcinoma of the Kidney in Children; Two new Observations.[1] — The first case was one of a young girl four years old, in whom the left kidney was affected and entirely destroyed by a medullary cancer. Its weight was four kilogrammes. There were metastatic deposits in the left lung. In the second case there was also a medullary cancer of the left kidney in a young girl eight years old, and also metastases in the liver. In this case was worthy of notice an abundant development of wooly hair; also on the pubes, and in the axilla a growth of hair similar to that found after puberty. There was a vaginal mu-

[1] Deutsches Archiv für klin. Medicin. Band xvi. Centralblatt für medicinischen Wissenschaften, April 8, 1876, No. 15.

cous discharge. The hair continued to increase in growth, and the genitals began to take a development as in grown-up young women, and the white tint of the child became much darker. The explanation of the congestion and early development of the genitals was found in the fact that both internal spermatic arteries were uncommonly large. In neither case was there any hereditary predisposition.

Fœtal Condition of the Lungs in New-Born Children that lived and cried after Birth.[1] — On the 8th of January a woman gave birth to three boys, when seven and one half months pregnant. At the time of birth two midwives were present in attendance. The second child followed rapidly the first, and both came into the world alive; the third was still-born. The first child began shortly after its birth to cry; likewise the second. Both children continued to cry whilst being washed and dressed, and continued to do so for a considerable time afterward. The cry was so loud as to be distinctly audible in a room separated from the sick chamber by two closed doors and a corridor. Both children died about half an hour after they were born. The autopsy on the following day showed, of first child: Stomach distended with air, which extended into the commencement of the duodenum. Otherwise there was nothing abnormal in the abdominal cavity. Both lungs showed entire absence of expansion, were of bluish color, and firm consistence. Heart and pericardium normal. There were no ecchymoses in the substance of the heart or of the pericardium. The heart and lungs together sank in water; each lung separated from the heart also sank in water. Notwithstanding portions were cut from every part of the lungs, there was not found any portion that did not sink, and while under water it was impossible to press out any bubbles of air from any portion. Autopsy of second child: There was no air in the stomach or intestines; in the stomach there was a small quantity of a whitish, albuminous fluid. Lungs not distended, bluish, and of firm consistence, except on the lower border of the right upper lobe, where there was a reddish colored place the size of a half pea. This small portion of lung floated on water. The entire remainder sank. Heart normal. There were no subpleural or subpericardial ecchymoses.

In these two cases is found a new evidence of the possibility of lungs being entirely empty of air, and incapable of floating on water in new-born children, who had demonstrated by movements and loud crying that they had lived after birth.

According to views generally prevalent, the possibility of such a condition of the lungs as was found at the post-mortem would not be allowed in infants who had cried, as was the case in these. The first child would perhaps have been exhibited as one born alive, owing to the distention of the stomach with air; the second child would, too,

[1] Dr Erman, Hamburg, Virchow's Archiv, March 28, 1876.

perhaps have been admitted to have breathed once, owing to the small place in one lung above mentioned as containing air.

Observations analogous to the above have, it is well known, been made time and again, and also reported, without having up to the present time received credit, owing to the difficulty of explaining them.

Maschka's[1] explanation appears to the author to have the most weight. He, together with Czermak, refers to the change in shape of the cavity of the mouth and of the pharynx, the power of creating sounds, and finally, as Billard before him, admits also the power of air which merely passes in and out of the bronchi to set in vibration the vocal chords, and to produce tones. The views of Simon Thomas, adopted also by Schroeder,[2] do not appear to the author at all tenable, not being in harmony with the action of the lung tissue containing air in general, nor with that observed in the two cases above given. Thomas's explanation is, that the lungs of these two children at first contained air, but that this air at the end of life, through the elasticity of the lung tissue, was entirely driven out. Both the above authors claim that in such children a time arrives after their birth when the strength and powers of resistance of the respiratory muscles diminishes, and, as a consequence the expiration which takes place, owing to the elasticity of the lungs, expels a greater amount of air than was taken up by the previous inspiration. There is no denying that were such a state of things to go on for a sufficient length of time, the result claimed would be accomplished, and the lungs be found entirely empty of air and of fœtal consistency.

There is one obstacle to the acceptance of such a proposition: that a complete expulsion of air from the lungs by the power of the elastic tissue has never been observed previously, nor was it found in the two cases above reported at the autopsy.

Both Schroeder and Simon Thomas, in two cases of new-born children who lived after birth, and cried, respectively, one half hour and seventeen hours, and in whom the lungs were found empty of air and incapable of floating in water, experimented by blowing them up, with the result of finding that a large amount of air was subsequently expelled, but in neither case was there a complete emptying of the inspired air. The argument that there was a post-mortem loss of elasticity, and consequently that only a portion of the air was expelled, can be opposed to this experiment. There is at any rate no proof that can be offered to substantiate the above explanation.

The author in conclusion expresses the belief that for the present the question "Must there be necessarily air in the lungs, when a new-born

[1] Maschka. Leben der Neugebornen ohne Athmen. Prager Vierteljahrsschrift, Bd. 73, s. 66.

[2] Schroeder, Kann aus Lungen Neugeborner, die geathmet haben, die Luft wieder vollständig Entweichen. Archiv für klinische Medicin, Bd. 6, s. 415.

child lives an hour or more and cries?" cannot be so surely decided as Schroeder attempts, who says, "If a child makes quiet and regular respiratory movements, and thus lives for an hour and cries aloud, air must of necessity have entered the lungs."

As seen at the autopsy, there was without the slightest doubt neither air nor any other contents in the lungs; but the lungs were collapsed, and in exactly the same condition as is found in infants which have never breathed; it follows that the air must have again left the lungs.

THE TRANSMISSION OF SYPHILIS.[1]

THIS monograph is certainly one of the most praiseworthy clinical studies which has appeared for several years. The great interest of the question under discussion is generally conceded, and it is a matter for congratulation that in this brochure the author has approached it without bias, has been supported by sufficient facts, and that he has therefrom drawn conclusions warranted by them. It is strange, still it is nevertheless true, that the majority of articles treating of the hereditary transmission of syphilis have been written in support of the now so-called Cullerier theory, that the father is powerless to transmit syphilis to the offspring, and that this accident could never occur except when the mother herself was syphilitic, — in short, that the mother alone is capable of transmitting syphilis to the child. There were several reasons incident to the question which tended to the quite extensive acceptance of this doctrine; but it is very probable that its positiveness of statement, unqualified by any modifications, did much to cause it to be so generally received. The want of a proper field for study has also been a serious drawback to the solution of this important question. Kassowitz, however, as he states in his introduction, has had an abundant field and large opportunities, and he certainly has made good use of them. In addition to his own rich material he presents to us the cases and views of others, whose opinions he subjects to a searching analysis. He first considers quite fully the present state of opinion upon the question as to the relative part taken by the mother and father in the transmission of syphilis to the child; that is, whether a healthy woman can bring into the world a syphilitic child, the father being syphilitic; or whether, the father being healthy, a syphilitic mother can bear a healthy child. He briefly but tersely considers the various causes which have led toward different opinions, and concludes that various facts have been confounded together, such as infection of the semen and of the ovum with placental infection; and he thinks further, also, that observations have been made in a narrow, one-sided manner; as for instance, syphilographers deny the immunity of the mother for the reason that they, being specialists, are generally consulted by syphilitics; and, on the other hand, the physicians for children's diseases, seeing syphilitic children brought by healthy and blooming mothers, conclude that the latter possesses an immunity. The author then considers the theory of

[1] *Die Vererbung der Syphilis.* By DR. M. KASSOWITZ. Vienna: W. Braumüller. 1876.

transmission in general and its relation to the inheritance of syphilis. The ovum of the female being fructified by the semen of the male, a new being is formed which partakes of the character of the two parental organisms. He thinks that even as physiological peculiarities may remain latent and not be perceptible for years, so also may pathological peculiarities, such as malformations, phthisis, cancer, etc. Many facts prove that such inheritance occurs from both parents. The influence of the father only extends to the period of impregnation, while that of the mother is continued until birth. This suggests the question, Can a mother, through the utero-fœtal and later placental circulation, transmit to the newly developed individual any of those qualities which it receives at the time of fertilization of the ovum? Can she transmit to it any corporeal or physiological power, or the capacity for the development of such? Kassowitz says that no facts bear out these suppositions, but that by means of a healthy nutritive material she may invigorate the characteristics conveyed at impregnation or interfere with their progress by insufficient nourishment. He thinks that such diseases as the exanthemata may be conveyed from the mother to the fœtus; therefore disease reaches the unborn child by the fertilization of the ovum, or by direct inheritance, or by the passage of the poison through the utero-placental circulation or intra-uterine infection. Kassowitz thinks that it is very improbable that two processes so different can produce similar results, and to put the matter in a more forcible way he formulates the two following questions: 1st. Can a non-syphilitic mother bear a syphilitic child? 2d. Does syphilis acquired by the mother during the course of pregnancy affect the offspring which at conception was healthy? He is positive that healthy women can bear syphilitic children, and to prove the point adduces strong evidence, not only in numerous cases reported by others, but also by the statistics, taken with great care, of the Vienna Foundling Hospital. These contain records of four hundred cases of hereditary syphilitic children, of whose mothers one hundred and sixty-six were found to be healthy; one hundred and twenty-two were syphilitic, while the rest were of doubtful conditions. These women were examined with the greatest care, and were under observation for years; moreover, when regarded as healthy they were not subjected to treatment. This removes, it will be seen, a powerful objection. Certainly these facts are worthy of consideration. Kassowitz shows the weak side of the arguments of Cullerier and others by quoting their cases, which are mainly those of syphilitic men who marry and whose wives bear healthy children. He makes the very strong point against them that they do not say anything as to the treatment and the extent to which it has been carried in these cases, and it is well known that by a mercurial course the transmissive power of syphilis may be destroyed or temporarily held in check. He further shows that the cases of these observers are so meagrely reported, and so lacking in very essential points, that they are not worthy of consideration in forming conclusions in such an important and delicate question.

He then considers the second question, Can the mother of a child, syphilitic from its father, remain healthy? Before answering the question he discusses the belief of many observers, that it is possible for a mother to be infected by her syphilitic child. It is thought that this occurs in three principal ways: —

1. The infection of the healthy mother through the placental circulation from the fœtus diseased from its father.

2. The infection of the mother at the time of conception by syphilitic semen.

3. The infection of the mother by the semen of a man in whom syphilis is latent and who is free from infecting lesions, independently of conception or fertilization.

Kassowitz denies each of these modes of infection. He thinks that the theory of infection by the ovum, the *choc en retour* of Ricord, which was once advanced by Hutchinson, is based on cases badly observed and defective in essentially important details. According to this view, this mode of infection is a slow poisoning of the system by successive pregnancies, while facts prove that the infection of the system by syphilis is always at first severe, and it then tends to wane until it finally dies out. It will be seen that this course is at variance with what is claimed to occur in the *choc en retour*. Kassowitz then shows that in point of time the evidences of syphilis in the mother often point to infection from without rather than from the fœtus; as for instance, when the manifestations appear shortly after conception, when the disease in the child is not recognized, and certainly if present is not in a state so advanced as to warrant the assumption that the syphilis of the mother is derived from it. Then again, after several pregnancies a mother gave evidence of tertiary lesions, or of a cachexia, and it is assumed that she was rendered syphilitic by her children. The author thinks that these cases are either insufficiently observed or their nature is misunderstood. The tertiary lesions may follow secondaries which have passed unobserved and were due to contagion from without, and the cachexia may be of simple origin and not due to syphilis. Kassowitz acknowledges the force of Colles's observation that mothers have never been known to be infected by their own children, and offers nothing new in explanation. As to the second mode of infection, which was first advocated by Bärensprung, that the semen of a syphilitic man was harmless until fertilization occurred and then syphilis would result, Kassowitz shows the weakness of the argument and the cases quoted in support of it, and thinks that the infection is of the ordinary kind by means of a sore on the genitals. This brings him to the question whether syphilis acquired during the term of pregnancy can be conveyed to a fœtus healthy at conception. He thinks that this view is rather more tacitly accepted than arrived at by careful observation. He brings forward the damaging fact that this does not always occur, whereas if this supposition were correct, infection would not be of exceptional occurrence. The exact time at which this infection is possible is in doubt, but some authors specify certain months in which the child escapes. The fact of the case is simple, namely, that syphilitic mothers can bear healthy children. In order to establish this mode of transmission, Kassowitz thinks that the following conditions are necessary: 1st, That the health of the father at the time of conception is proved. 2d, That the health of the mother at the time of conception is also proved, and the exact time of her subsequent infection be accurately determinable. The infecting ulcer or some of the early lesions should have been seen by the observers. 3d, The syphilis of the child must be

proved beyond a doubt. The fact that children are prematurely born, still-born, or sickly, without a previous outbreak of syphilitic lesions, should not be taken as a proof of syphilis. If all of these facts are not fully brought forward, cases are not worthy of consideration, and Kassowitz shows that there is not a recorded instance which will bear this thorough analysis; therefore he rejects this theory. He further quotes the fact as occurring in cases of twins, one of which is more profoundly syphilitic than the other, even in some instances one being free, as tending to prove that the mother alone is not the infecting medium. Kassowitz, as a result of his studies, formulates the following conclusions: a child whose parents were healthy at conception will not become syphilitic, even if its mother becomes thus affected during the course of the pregnancy. Such infection may induce abortion, or early birth, as any severe disease may, but not by transmitting the disease to the fœtus. He also thinks that the syphilitic poison does not pass by the circulation from the mother to the fœtus. The author then considers the nature of the syphilitic poison and its difference from that of the exanthemata. That of syphilis is a fixed contagium and is contained in solid particles, hence must be transmitted with the elements of the organism, whereas that of the acute exanthems is volatile, may be transmitted by the breath; and while that of syphilis, owing to the peculiarities of the placental circulation, cannot pass either from mother to fœtus or the reverse, the contagium of the exanthems may reach the fœtus through the fluid parts of the blood. The author thinks that the capability for transmission of syphilis begins at the moment of the appearance of general syphilis, and from that time its power gradually wanes. It may be observed that there are periods of latency in which transmission does not take place; this is due either to the peculiar course of the disease, which has exacerbations, or to the action of a mercurial treatment. Perhaps no more important point occurs in the whole book than that relating to the powerful influence of mercury in preventing the transmission of syphilis. Finally, as to the point of late so extensively considered, whether the father's influence is potent in this transmission, Kassowitz expresses the opinion, based on cases, that he is more frequently the cause of syphilis than the mother is. He gives statistics to prove this point, which it will be seen has a very great practical import. Space will not permit us to consider in detail the chapters on the intensity and duration of the transmissive power, of the latency of inherited syphilis, and of its relations to other constitutional diseases. Though very interesting, they contain nothing particularly new or important. It will be seen from this hasty review that the author has considered the subject in all of its bearings, and it may be added that he has done his work conscientiously and thoroughly. — R. W. T.

EXHIBITS OF THE MEDICAL DEPARTMENT U. S. A. AT PHILADELPHIA.

Five pamphlets by J. J. Woodward, Assistant Surgeon U. S. A., in charge of the representation of the Medical Department U. S. A. at Philadelphia, give in a concise way a description of some of the exhibits of the U. S. A. Medical Department at the International Exhibition of 1876.

Two papers devoted to the description of rail and water transportation of sick and wounded soldiers during the war of 1861–65 are very fully illustrated by plans of hospital cars and steamboats, which, together with the text, enables the reader to form an accurate idea of how much the medical department of the army contributed toward alleviating the sufferings of sick and wounded soldiers forced to undergo the hardships of the journey from battle-fields and camps.

The paper on Hospital Construction treats of field, tent, and barrack hospitals as employed during the late war; also of the present post hospital; one of the latter has been constructed, in all its details, by the government, at the Centennial grounds. It cannot fail to be of interest to medical visitors, especially as it contains, in addition to the usual paraphernalia of post hospitals, many interesting specimens of gun-shot and other injuries, which have been transferred from the Army Medical Museum at Washington. One of the pamphlets under consideration has for its title, The List of Skeletons and Crania in the Section of Comparative Anatomy of the U. S. A. Medical Museum. This list fills some fifty pages, and is intended, as the author states, for distribution among naturalists and others, for the purpose of showing the deficiencies of the collection and soliciting contributions.

Number five of this series of publications is a description by Messrs. Perot & Co. of their medicine wagon, familiar to most army surgeons during the war of the rebellion. Dr. Woodward disclaims responsibility of authorship in this paper.

We think the appliances treated of in these papers, and also exhibited at Philadelphia by the government, compare most favorably with the exhibits of any other nation. The forward step taken by the surgeons of the army cannot but be a source of gratification to their brothers in civil life.

REGULATING THE PRACTICE OF MEDICINE.

As long ago as 1872 the State of Texas passed a law regulating the practice of medicine. Every practitioner was required to register himself, stating his qualifications. In each county an examining board, composed of graduates of recognized schools, was appointed to inquire into said qualifications, and, if these were not satisfactory, to subject the applicant to an examination. The working of this law is said to have been very beneficial. During the past year this act has been amended so as to compel every one desiring to practice medicine to undergo an examination before a board composed of not less than three practicing physicians, appointed to serve two years by the presiding judges of the district courts of the several judicial districts of the State. The examination includes the following subjects: anatomy, physiology, pathological anatomy and pathology, surgery, obstetrics, and chemistry. It will be observed that materia medica is not included, and that the homœopathic question is thus avoided in the examination. A copy of this bill is to be found in a recent number of the *Philadelphia Medical Times*. To what extent homœopaths and other sects will be represented upon these boards under the operation

of this law does not appear. While it is desirable that the practice of medicine shall be withheld from the totally ignorant, it is also equally desirable to exact a proper standard of medical knowledge. We fear that this will vary greatly in the different counties, as in some the examining boards will be composed of the most heterogeneous elements. This law has the undoubted advantage of disposing of the more flagrant forms of charlatanism, but practically recognizes others, and does not procure a higher standard of education than may be brought about by any well-regulated state medical society. The experiment is undoubtedly a very important one, the difficulties surrounding a proper solution of the question being very great, and we shall watch the working of the law with great interest.

MEDICAL NOTES.

— Dr. Walter Channing died July 27th in his 91st year.

— Dr. James R. Chadwick has resigned his position as lecturer on diseases of women in Harvard University.

— Dr. W. A. Haskell, whose death we have to record, was born in Middlesex County, Massachusetts, in 1817. It may be of interest to state that Dr. W. A. Haskell was born exactly one hundred years after the birth of his great-grandfather, and that he commenced his professional work precisely a century from the time this great-grandfather entered upon his professional career, thus continuing this practice in the family through an unbroken series of over one hundred years. His mother was a descendant in a direct line of the famous John Cotton, of Boston, and Cotton Mather, D. D. Dr. Haskell studied medicine with his father, and also with Dr. George Bartlett, of Boston, and graduated at Dartmouth Medical School in 1839. He first practiced medicine in Deerfield, Mass., but in the fall of 1843 he decided to remove to the West on account of a slight hæmorrhage of the lungs. He settled in Hillsboro', Montgomery County, Ill., where, as partner and successor of Prof. Wm. Herrick, of Rush Medical College, Chicago, he resided until the year 1864. For the last few years his health has not permitted him to continue the practice of his profession.

— At an informal meeting held in Philadelphia, at the rooms of the section of practical medicine, of the American Medical Association, Wednesday, June 7, 1876, after the election of a chairman and secretary, pro tem., it was resolved: To call upon such American physicians as had evinced a special interest in dermatology to unite in forming an American Dermatological Association, and that the meeting for organization be held in the University of Pennsylvania, Philadelphia, on Wednesday, September 6, 1876, at six P. M., or immediately after the close of the meeting of the section of dermatology and syphilology, of the International Medical Congress, on that day. All those who are desirous of joining this association can confer with the secretary, Dr. Bulkley of New York, or the chairman, Dr. Wigglesworth.

— Dr. Elisha Pope Fearing died at Nantucket, June 25, 1876. He was born at Wareham in 1785, entered Brown University in 1804, studied med-

icine with Dr. Andrew Mackie, of Wareham, attended lectures in the city of New York, and began the practice of his profession in Falmouth, Mass., in 1810. Sixteen years later he removed to Nantucket, to enter upon a large practice in that busy and growing town. Here he remained until his death, at the age of ninety years and eight months. His mind, always vigorous, was scarcely dimmed till the close of life, while a tenacious physique enabled him to conduct almost the entire midwifery practice of a population of from five to ten thousand for many years, and a general practice extending over a total of sixty-one years. He married a daughter of Rev. Henry Lincoln, of Falmouth, who survives him.

Dr. Fearing was one of the few remaining representatives of the generation that brought forth men like James Jackson, John Ware, and others. The principles of that generation were founded in shrewd observation; their theories never carried them off the firm basis of facts. A keen practical sagacity, a rich and well-used experience, an abundant medical reading and study, were well seconded in the case of Dr. Fearing by a habit of bold, decisive action, and render his name fit to be mentioned by the side of those worthies. His person was not easily forgotten. A short, compact frame, with a large head, a mouth full of determination, that seemed to poise its words, a quick, eager way of questioning, an eye that sparkled and a face that beamed all over with pleasure at meeting fresh faces or new ideas, a manner brusque, but tempered by courtliness, are well remembered by many among us.

BOSTON CITY HOSPITAL.

MEDICAL CASES OF DR. F. W. DRAPER.

[REPORTED BY C. W. BROWN, M. D.]

Cases of Sunstroke; Recovery. — CASE I. J. H., aged twenty-eight, a very well-developed, muscular laboring man, after exposure to the sun all day, was attacked at three P. M. with faintness and vertigo; his "head felt boiling." Similar premonitions had occurred forty-eight hours before, but without subsequent symptoms.

Between the attack of to-day (July 13th) and the time of entering the hospital at 5.55 P. M., there was an interval of unconsciousness; the patient was able, however, to walk into the hospital with assistance, and to answer questions, though with difficulty.

On examination the skin was found to be intensely hot and dry; the face flushed; there was marked subsultus tendinum. The temperature was 104.6°; pulse 111, full, bounding. In the process of moving to the ward, for which purpose he was placed on a stretcher, the patient struggled violently, and presently passed into an epileptiform convulsion. The pupils immediately before the seizure were dilated to their widest extent. The subsequent nervous symptoms were restlessness, jactitation, and occasional clonic, spasmodic movements. The head was strongly retracted. The pupils were closely contracted, except immediately before such spasmodic seizure, when they became dilated. The

eyes were turned upward in their orbits and fixed; the conjunctivæ were injected. In the midst of one of the convulsive seizures the breathing entirely stopped, and was restored by aid of artificial respiration. Pulse at the time not observed. The skin meantime was intensely hot. Upon the hands, forearms, and front of thighs was a petechial eruption resembling measles.

At eight P. M. the patient became quiet, sleeping very profoundly, and except slight restlessness at midnight convalescence was progressive.

Treatment. From six to seven P. M. cold was assiduously applied in the form of ice-bags to the head, and ice-water and ice to the surface of the body. At seven P. M. thirty grains of bromide of potassium were given by the mouth. At 7.15 P. M. four ounces of blood were taken from the nucha by cups. At 7.30 P. M., the pulse becoming very small and rapid, and respiration irregular in force and frequency, an ounce of brandy was given per rectum. At midnight the patient had forty grains of bromide of potassium.

Some time before entrance to the hospital he had received one third of a grain of sulphate of morphia subcutaneously and one drop of croton oil; the latter had no immediate effect.

Time.	Pulse.	Temperature.
5.55 P. M.	111	104.6°
6.35 "	140	107°
7.45 "	120	106.2°
8.20 "	102	104.4°
9.15 "	100	103.2°
10.15 "	103	102.6°
11.30 "		102.2°
2.15 A. M.		101°
4 "		100.4°
8 "		99.4°

July 14th. The patient was quiet after midnight. This morning is fully convalescent. Bowels have moved freely. Eruption on the skin has disappeared. Temperature, P. M., 99.6.° Pulse 72.

July 15th. Temperature 99°. Pulse 60. Discharged, well.

Case II. C. S., aged fifty, a healthy laboring man, a moderate user of alcoholic liquors, but never to excess, entered July 18th. He had taken but "two glasses of liquor" on that day. In the afternoon of July 18th, an oppressively hot day, the patient, without any premonitory symptoms, became unconscious, and fell in the street; he was brought to the hospital at 5.10 P. M., about half an hour afterward. At the time of his entrance his skin was dry, burning, 107.8°; the pulse was full, bounding, compressible, 140. Respiration was stertorous, moaning, 35. Pupils contracted. Fæces and urine passed involuntarily. No reflex movements caused by irritation of extremities or conjunctivæ. At six P. M. convulsive movements began to appear, preceded by retraction of the head and burrowing into the pillow. Later, the convulsions became more severe, and were marked by loud cries and struggling, opisthotonos, rigidity of muscles, and turning of body towards right side. The convulsions recurred at increasing intervals until eleven P. M., and each time were controlled by ether. After eleven P. M. the patient began to manifest signs of consciousness, and slept quietly most of the time, but occasionally waked in a frightened manner. During the convulsions the pupils became widely dilated.

A petechial eruption resembling measles was present on the arms at the time of entrance, but became more marked during convulsive attacks, fading in the interval to brighten with each severe paroxysm.

Treatment. Cold was applied, by means of ice-bags to the head and ice-water to the body, until seven P. M.

On several occasions the pulse became weak, and brandy was given subcutaneously, the rectum having rejected enemata. At eleven P. M. the patient had thirty grains of bromide of potassium, and this was repeated at one A. M. on the 19th.

Time.	Pulse.	Temperature.
5.10 P. M.	111	107.8°
5.20 "	140	108.2°
5.40 "	146	107.4°
6.10 "	124	105.5°
6.55 "	156	103.6°
7. 5 "	135	103.4°
7.35 "	144	104.9°
7.55 "	150	105.4°
8.10 "	140	105.7°
8.20 "	140	105°
8.45 "	146	104.5°
9.45 "	120	104.6°
10.30 "	130	103.4°
11 "	141	102.2°
12 midnight.		101.6°
1 A. M.	114	101.2°
3 "	112	100.2°
5.40 "	100	100.2°
8.25 "	104	99.8°

Respiration ranged from 30 to 44 per minute.

July 20th. Fully convalescent. Temperature 98.9°. Pulse 80.

July 21st. Discharged, well.

Acute Rheumatism, with Cerebral Complication; Death. — J. D., aged thirty, entered July 8th, with a history of previous attacks of rheumatism in 1863 and 1864; otherwise he had been healthy until six days ago, when he was attacked with pain, swelling, and tenderness in nearly all the joints of the body. The shoulders, right elbow, wrist, and knee were affected at entrance, all being covered with a red blush. Pulse 120, small; temperature 101.4°. Salicine in fifteen-grain doses every hour was prescribed, and all affected joints were wrapped in cotton and covered with oiled silk.

July 9th. There was less pain and swelling in right knee; the left knee was swollen, stiff, and painful. A systolic murmur was heard at the left of the sternum. The aortic sounds were clear. The patient slept very little during the night, although he had ten grains of Dover's powder. Perspires very freely.

July 10th. Slept better. Some pain on motion, none when quiet. Four hundred and thirty-five grains of salicine had been taken. P. M. Complains of pain in shoulders.

July 11th. Much pain all night. Slept little. Has had no nausea or headache. Has taken three hundred and thirty grains of salicine additional. Omit salicine. Ten grains of salicylic acid were given every hour in pills.

P. M. After the patient had taken eighty grains of salicylic acid the pain was much less. The joints were slightly tender on pressure; could be flexed without causing much pain. Some nausea. Omit acid in pills and give in solution.

July 12th. Slept soundly all night. This morning, after taking one hundred and ten grains of the acid, the patient could flex all the joints freely without pain, except the left shoulder, where the pain on motion was slight. No tenderness on pressure, except on left shoulder.

July 13th. Had a restless night, but not because of pain. Pain not severe, and confined to right knee. Took thirty grains of acid in the night and eighty the day previous. This morning the patient complained of nausea, and the acid was omitted temporarily. One eighth of a grain of morphia was given by mouth, but it did not cause sleep. The nausea continued during the day, and the patient refused the salicylic acid, but ate the usual amount of food at dinner. A friend visited him between two and three P. M., and the two chatted quite freely; but afterward the patient was very restless, tossing about the bed, and because of general discomfort proposed to get up, but was induced to lie down. About 4.40 P. M. his face suddenly became flushed, and very soon livid; immediately he passed into a convulsive state, characterized by general clonic spasms, frothing at the mouth, the foam being bloody from his bitten tongue; there was no rigidity or opisthotonos. The pulse was full, bounding, and very rapid. The heart's impulse was rapid but regular. No pericardial friction was detected. The skin felt very hot, and the temperature was 110.8° in the axilla. The patient was placed in a bath, the water being of the temperature of Cochituate as drawn from the faucet. Spasmodic movements had then ceased, and were followed by coma. The pulse became slower and weak. The patient was given an ounce of brandy by rectum, which temporarily increased the strength of the pulse. The respiration was regular. The skin became perceptibly cooler, but the pulse and respiration gradually failed, the respiration first, and the patient died at 5.35 P. M., soon after being removed from the bath. The temperature, while the salicine was being taken, ranged from 100.2° in the morning of the 9th, to 102.6° in the evening of the 10th. Under salicylic acid the temperature fell in the morning of the 12th to 98.8°, but rose to 102° at night, and was 101° in the morning of the day of death.

Autopsy eighteen hours after death. Post-mortem change well marked. Arachnoid and pia mater congested, but otherwise normal. A drachm of bloody serum in each lateral ventricle. Brain substance normal. Heart pale, soft, and friable. Valves unchanged. Nothing remarkable noticed about other organs.

LETTER FROM PHILADELPHIA.

Messrs. Editors, — The world's convention of the homœopaths recently held in Philadelphia did not develop anything strikingly new. There were representatives from every quarter, and numerous papers were read. Many wise, many learned things were said; among others, a Philadelphia homœopath made the remarkable statement that, notwithstanding the oft-repeated

assertion of Charles Sumner's physician during his life that Sumner's heart was diseased, the post-mortem at Boston, made by the most distinguished physicians of the day, revealed the fact that neither the heart nor any other organ was diseased. "We here present know," said this wiseacre, "that Sumner died from mortified pride." A New Bedford delegate then said that the assertion that Sumner died of mortified pride was very poor pathology, and stated that from his own knowledge he believed Sumner died from the injudicious administration of a hypodermic dose of morphia, superadded to the effect of a very heavy dinner he had eaten on the day of his death.

The first-mentioned individual made one honest homœopathical assertion, namely, "the infinitesimal dose early became a necessity of homœopathy, and it is a necessity to-day." He might have added that if homœopaths had been true to the Hahnemann dose they possibly might be considered only weak-minded but honest; whereas nowadays they claim the right to give any medicines in any dose they feel inclined.

The reports of the various Philadelphia dispensaries for the last year show increasing usefulness of these charities, which are especial benefits in these days of lack of money.

The old Philadelphia Dispensary, which was instituted in 1786, reports 7826 patients treated in the house and 1348 attended by district physicians. The eye and ear department, under control of Dr. George Strawbridge, reports 2030 patients and 15,968 visits; the obstetric department relieved 214 cases of various sorts.

Dr. Duhring's report of the work done in his dispensary for skin diseases shows that he has treated 371 new patients and received 2368 visits.

Dr. Charles Burnett conducts the Philadelphia Infirmary for Diseases of the Ear. His second annual report indicates that the infirmary is growing in reputation. He reports 350 new patients for 1875, double the number treated during the first year of the institution.

The other dispensaries in town probably treated thirty thousand cases during the year 1875. With one or two exceptions, all our dispensaries furnish medicines as well as advice. The exceptions give advice and prescriptions, which are dispensed by certain liberal druggists at a cost to the patient which is merely nominal.

The little hospital in the exposition grounds is a daily blessing. Within three hours on the opening day a case of fracture, one of contusion of the head, one of exhaustion, one of congestive chill, and a crushed hand were treated by the physician on duty. It is rather remarkable that out of a crowd numbering upward of two hundred thousand, exposed to the frightful crush in certain portions of the grounds, so few were injured. At that time, however, and indeed for many days subsequently, the whereabouts and even the existence of the hospital were unknown to many who would have gladly sought medical relief. The guards, either through stupidity or willfulness, required several weeks in order to learn the location of the hospital building, so that many persons left the grounds in order to find a physician who otherwise would have gone to the medical department. Even those who wisely originated this branch of the Centennial Commission probably did not realize how invaluable it would prove

to visitors, exhibitors, etc. In the early days of the Exhibition I should judge that twenty patients was the average daily number treated, but little by little the daily papers, correspondents of distant journals, persons who had been treated, and finally the placards of the medical department, which after some delay were posted throughout the grounds and buildings, acquainted the general public with this courtesy of the Centennial Commission, and since the middle of June the hospital staff have treated an average of three hundred patients per week. Among these are occasional fractures, dislocations, and machinery-crushing cases; wounds of the minor sort, such as lacerations, cuts, pinched fingers and toes, are rather common. There have been two or three deaths, the result of falls from buildings and apoplexy. One frantic female attempted a laudanum suicide, but was saved by the physician on duty.

The majority of the cases are the result of hot weather, exhaustion, ice-water, and gastronomic rashness. Diarrhœa and cholera morbus are very frequent. There have been, too, a fair array of patients whose troubles were the result of chronic ailments of heart, brain, and lungs. Contrary to expectation, there have been no confinement cases, and only one threatened abortion; but many ladies who overtasked themselves at sight-seeing during their periods have been provided with medical aid and a resting-place. No lady should visit the Exhibition during the menstrual epoch. The fatigue which attends even a superficial view of the immense number of attractive objects in the various buildings cannot properly be borne by any person who is even temporarily ill.

The hospital stands in Lansdowne Ravine, directly behind the Judges' Hall, is numbered 133, and may be also known by its white flag bearing a red Geneva cross. An ambulance stands before the door from morning till night, in readiness to bring patients from any part of the grounds. Stretchers have been distributed to all the buildings and guard-houses, and everything has been done to perfect the facilities of this department.

I should say that notwithstanding the terrific heat of the past three weeks only one case of well-defined thermic fever has been brought to the hospital. The remaining cases which were classed under the head of exhaustion by heat were not seriously affected.

The medical visitor may with benefit devote at least one entire day to the examination of the medical, surgical, anatomical, and histological exhibits of the Exhibition. In the main building these exhibits are chiefly surgical, chemical, and therapeutical. They are, of course, both domestic and foreign, not classified in one section, but each in the department of its own country, so that in order to find them all a certain amount of patient search is necessary. There are surgical appliances of every sort. The American at once recognizes the superior ingenuity, elegance, and simplicity of home productions, and this refers especially to such as relate to the treatment of fractures. Some of the foreign appliances are veritable curiosities. Among all these surgical exhibits that of Messrs. Codman and Shurtleff, of Boston, is by far the finest and most varied. In the Japanese section, at its extreme southern end, is a little case of surgical instruments manufactured by a Tokio mechanician, very well made, rather clumsy it is true, but a really excellent imitation of the modern instru-

ments. The display of dental instruments, chairs, and other conveniences is very elegant, and bears testimony to the remarkable ingenuity of the American mind. Nor must I forget the many cases of medicines, liquid and solid. Some of the crystalline preparations are marvels of beauty.

In the Austrian section, P, 28, may be seen exquisite models illustrating the normal and pathological anatomy of the human ear. There are forty-nine specimens in all, of which forty-four show the temporal bone in various conditions. The remaining five typify the relation of the ear to the base of the skull, and also show the muscles of the soft palate and the Eustachian tube. There are, besides, plaster casts of certain diseases of the membrana tympani. The entire collection is the contribution of Pollitzer, of Vienna, who devoted many months to the work of preparation. It is said that the College of Physicians has secured this collection, probably by means of the Mütter museum fund.

The United States government exhibits a model hospital, in personal charge of Dr. Yarrow, U. S. A., whose gentlemanly courtesy makes it a pleasure to visit this building. In room No. 4, where the medical visitor is asked to leave his autograph, are several folios of superb photo-micrographs of the blood-corpuscles of man and the dog, prepared under various microscopes, the average diameter of the corpuscles shown in each picture and the power of the object glass used being given in figures. There are also photographs of various sorts of wool and hair, capillary blood-vessels, lymphatics, etc., all being the work of Dr. J. J. Woodward. A portfolio of fine photo-micrographs of tissues of the human body, prepared by Dr. W. Thompson, U. S. A., is not by any means the least interesting of the collection. On the lower floor of the building is a model ward, dispensary with a full assortment of medicines, a kitchen, etc. In a large apartment at the northern end of the building are beautiful models of railway conveyances for sick and wounded; also section models of invalid steam transports, several models of military hospitals, and anatomical preparations from the Army Museum at Washington. Rooms on the upper floor are devoted to the exhibition of army medicine chests, surgical instrument cases, and every variety of medical and surgical appliance. In the rear of the building stands a row of army vehicles, including ambulances, medical and provision wagons. I have forgotten to mention the two or three score of photographic exhibits of amputations and resections. These, of course, hang within the building.

Perhaps the most striking and attractive object in the structure is the large oil painting by Eakens, which hangs in the model ward. This painting is a portrait of Prof. S. D. Gross, and represents him, surrounded by the members of his clinical staff, in the performance of an operation in the college clinic. He has made an incision into the leg of the patient, who lies stretched upon a bed at the professor's left hand. Dr. Gross has paused in his operation in order to explain the disease, or its remedy, to the students who are dimly seen in the background. The painting being intended as a portrait of Dr. Gross, and not primarily as the representation of a clinic, the artist has thrown the accessories out of focus and concentrated his force upon the most prominent figure. Professor Gross stands erect, one hand resting upon the bed; with

the other, which holds a scalpel, both knife and fingers stained with blood, he is making a slight gesture, as if to enforce the words he is uttering. The portrait is of life-size and a most admirable likeness of the strong face and tall figure of the surgeon. One can hardly conceive of a more perfect resemblance. At the right of the professor is a most expressive figure of a female, whose clenched hands and general attitude of horror are in strong contrast to the concentrated attention of the students in the seats above the operator. The clinical assistants are grouped around the patient, one mopping out the wound; others separate the lips of the cut; another administers chloroform (Gross never uses any other anæsthetic); the clinical clerk is writing at his desk; in a doorway in the background stand Dr. S. W. Gross and a janitor. These are all faithful portraits. About slipping to the floor from the operating table is a gouge-chisel, which suggests that the operation is for necrosis. Cases of instruments and other surgical necessities are ranged upon a side-table, and all the well-known detail of such scenes are represented. The principal figures are illuminated by a sky-light directly over their heads. Thus the central group is brought out in strong relief, the students being in shadow. The one serious fault in the picture is the manner in which the body of the patient is treated. It is so much foreshortened and so covered by the arms of the clinical assistants that it is a perfect puzzle. The artist's intention evidently was to render this portion of the painting as free from the disagreeable as possible. He has succeeded so well as to bring upon himself rather severe criticism. Indeed, it is difficult to discover whether the incised limb of the patient be the leg or an attenuated thigh. It more nearly resembles the latter. As a whole, however, the picture is a great work, and wins much admiration. It was originally offered to the art committee, but the details of the picture proved so shocking that two or three members of the committee actually became faint, and it was deemed wiser to reject it; so that although there are in memorial hall pictures which are far more gory, this fine work of art at last found its way to the government hospital building. Let me advise those of your readers who visit the Exhibition not to miss a view of it.

The terribly warm weather of the past three weeks in Philadelphia has been the cause of almost unprecedented mortality. In a single week in July, 1872, there occurred in this city 885 deaths. This extraordinary death-rate was chiefly the result of excessive heat, although partially due to small-pox. Neither before nor since has there been so large a number of deaths in Philadelphia in a single week. The nearest approach to it was during the first week of the present month. There were 854 deaths. But during this summer no contagious disease has prevailed or added in a marked degree to the fearful list of mortality. The unusual loss of life must be ascribed to the tropical, life-sapping weather.

The list of deaths includes 488 males, 366 females. Adults 342, minors 512. Under one year, 337; from one to two years, 97; two to five years 45; under five years, 479; over fifty years, 154. By cholera infantum, 213; cholera morbus, 6; sunstroke, 80; consumption, 42; convulsions, 49; inflammation of the brain, 24; marasmus, 28; debility, 32; congestion of the brain, 63, etc. In July, 1872, the mortality among minors was proportionately

greater than during the first week of this month. The number of deaths from cholera infantum was nearly fifty per cent. greater four years ago than during the present summer. The mean temperature has been slightly higher this month than during a corresponding period in 1872, but the nights have been comparatively cooler, hence the mortality among young children has been measurably less. The mercury has at times stood as high as 106° in the shade, and the blazing weather still continues. Perspiration is so abundant that it is nearly impossible to write. The average maximum temperature during the first fourteen days of the present month was 97.5°; minimum, 73°. During a corresponding period in 1872, maximum, 91°; minimum, 77°.

PHILADELPHIA, *July* 20, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 22, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	1000	49.06
Philadelphia	825,000	587	36.99
Brooklyn	506,223	407	41.81
Chicago	420,000	264	32.69
Boston	350,000	242	35.55
Providence	101,700	71	36.67
Worcester	50,000	35	36.40
Lowell	50,000	40	41.74
Cambridge	48,000	23	24.91
Fall River	45,000	33	38.13
Lawrence	35,000	29	43.08
Lynn	33,000	10	15.76
Springfield	31,000	12	20.13
Salem	26,000	21	42.00

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Practical Treatise on Materia Medica and Therapeutics. By Roberts Bartholow, M. A., M. D. New York: D. Appleton & Co. 1876. (For sale by A. Williams & Co.)

A Manual of Percussion and Auscultation; of the Physical Diagnosis of Diseases of the Lungs and Heart, and of Thoracic Aneurism. By Austin Flint, M. D. Philadelphia: Henry C. Lea. 1876.

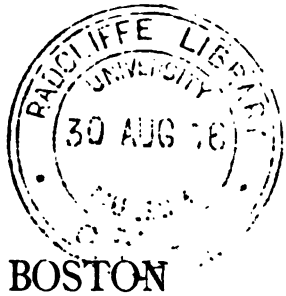
Hay Fever, or Summer Catarrh; its Nature and Treatment. By George M. Beard, A. M., M. D. New York: Harper & Brothers. 1876.

Theory of Medical Science. By William R. Dunham, M. D. Boston: James Campbell. 1876.

A Plea for Principles and Conservatism in the Treatment of Diseases Peculiar to Females. By William Abram Love, M. D. Reprinted from the Atlanta Medical and Surgical Journal. 1876.

On the Successful Treatment of some Forms of Peripheral Paralysis. By John Van Bibber, M. D. Reprinted from the Transactions of the Medical and Chirurgical Society of Maryland. 1876.

The Ready Reference for Physicians. By Richard J. Dunglison, M. D. Philadelphia. 1876.


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DR. JOHN JEFFRIES.

Dr. Jeffries was the last survivor in the fifth generation from his ancestor, Mr. David Jeffries, who came from England and settled in Boston in 1677. His father, Dr. John Jeffries, who died in 1819, was a distinguished physician and surgeon in his native town of Boston, both before and after the revolutionary war, having during this latter period served in the medical department of his majesty's forces as surgeon and medical purveyor. The *New England Medical Journal* of January, 1820, contains an interesting sketch of his life.

The late Dr. Jeffries was born March 23, 1796, at his father's mansion-house in Tremont Street. He was the third son named John, and the seventh child by second marriage to an English lady named Hannah Hunt, six years after his father's final return to, and settlement in practice again in, his native town of Boston. He went to Harvard College at fifteen years of age, and was graduated in the class of 1815, which contained a number of eminent men, some of whom still survive their classmate. The medical men of his class were Drs. Joseph Baxter, William Goddard, Thaddæus W. Harris, Appleton Howe, Thomas Pratt, William Sweetser, Jonas Underwood, Samuel Webber, and Danforth Phipps Wight. Three years later he received the degree of Master of Arts from Harvard, and March, 1819, the degree of Doctor in Medicine, having studied with his father and been a pupil of those whose names are attached to his medical diploma, — Drs. James Jackson, John C. Warren, John Gorham, Jacob Bigelow, and Walter Channing. In 1825, he received an honorary degree of Doctor in Medicine from Brown University. In 1826, he became a Fellow of the Massachusetts Medical Society. He was a councilor and censor for several years, and one of the principal movers in the establishment of the district societies, having been chosen the first president of the Suffolk District Society, which office he held for three years. He was an honorary member of the New York State Medical Society and of the American Ophthalmological Society. He served the city of Boston on the Board of Consulting Physicians for several years, during which he earnestly strove for the establishment of a properly organized Board of Health. For many years previous to his death he was a member of the Consulting Board

of the Massachusetts General Hospital and the City Hospital of Boston. For many years also he served on the Boylston Prize Committee of Harvard University. In 1820, Dr. Jeffries married Ann Geyer, daughter of Rufus Greene and Ann Geyer Amory, of Elm Hill, Roxbury. They had eight children, six of whom, two daughters and four sons, survive him.

From a very child he grew up in the spirit and feeling of the profession. At five years of age he stood by and held the lancet for his father. Intercourse with the medical pupils in his father's house, and familiarity with almost a museum of instruments and specimens there contained, naturally shaped his training and stimulated his ambition. From the time of graduation at Harvard, in 1815, he worked incessantly in study under his father and the professors of the college, so that immediately on receiving his medical degree he was taken into partnership by his father, and thus very rapidly entered into a large and active practice, which always so pressed upon him throughout his professional life, as to give him no opportunity of breaking off to follow European study, much as he appreciated its value and envied those who gained it.

His father's teaching and example gave Dr. Jeffries special interest in and knowledge of surgery. As early as 1829 he received the following offer from the late Prof. John Collins Warren, M. D.: —

Tuesday, March 24, 1829.

My Dear Sir, — Our friend Dr. Reynolds has resigned the office of assistant surgeon to the hospital. If agreeable to you, I should be glad to nominate you as his successor. Should you require any further information on the subject than what you possess, I will be at home to-morrow evening at eight o'clock, or will call on you as you may appoint.

Very truly yours, J. C. Warren.

This very complimentary offer on the part of the professor of surgery of Harvard, Dr. Jeffries was obliged to decline, as he had already undertaken a most important charitable work in connection with his still surviving friend, Dr. Edward Reynolds, namely, the establishment of an eye and ear infirmary, now known as the Massachusetts Charitable Eye and Ear Infirmary. To this charity he devoted his time and talents, exercising all his social and professional influence in its behalf. The following letter from the late Hon. John Lowell is of some interest as showing the efforts on the part of the founders of this now great charity: —

Tuesday Morning.

Dear Sir, — The statement made by you and Dr. Reynolds is very satisfactory as to the facts, and perspicuous and eloquent in its appeal to the public benevolence. I have not known a case so strongly demanding the sympathy and, of course, none having a better claim to the charity of the public, since the institution of the Massachusetts General Hospital.

I feel persuaded that it will be so received, or at least I have strong hopes

that it will be. I shall as far as I have any influence encourage it by my opinions and example. I shall attend this evening if I am not too much indisposed. I have been sick for some days past, and have not diminished my complaints by attending a public meeting last evening and partaking in the debates. Very truly yours, J. LOWELL.

DR. JEFFRIES, Franklin Street.

Dr. Jeffries not only devoted himself to the founding and establishment of the infirmary, but he delivered courses of lectures on the eye, both theoretical and clinical, and faithfully worked for eighteen years as its surgeon, even then being most earnestly solicited by the managers, especially the late Robert G. Shaw, not to resign. When he did so he received the following testimonial of the value of his services: —

BOSTON, *February* 9, 1843.

JOHN JEFFRIES, M. D.

DEAR SIR, — I have much pleasure in conveying to you the inclosed, and remain, sir, with much respect, your obedient, humble servant,

G. H. SHAW.

"At a meeting of the managers of the Massachusetts Charitable Eye and Ear Infirmary, held on Tuesday evening the 7th of February, 1843, a letter from John Jeffries, M. D., declining a reappointment as surgeon of the infirmary having been read, it was unanimously voted, 'that the same be accepted, entered at large upon the records, and placed on file; and further, that the thanks of the managers of the Massachusetts Charitable Eye and Ear Infirmary be presented to John Jeffries, M. D., one of the original founders, and for the past eighteen years a surgeon of the institution, for his unceasing efforts for the promotion of its usefulness and prosperity, and their deep regret that his professional duties require his retirement from the institution.'

"A true copy. Attest: G. H. SHAW, *Secretary.*

"BOSTON, *February* 9, 1843."

Dr. Jeffries practiced here in Boston fifty-six years. Besides his special work in ophthalmic surgery, he did a large midwifery and general practice. Long before and even after the establishment of the dispensary he was most prodigal of his physical and mental efforts among the poor of the town. It may be as truly said of him, as of his father before him, that "the poor of the town, from whom no fee could be expected, equally shared his best attentions with the richest of his patients; and if money were wanting to purchase the medicines and comforts he prescribed, it was as frequently supplied from his charitable purse." He made it a rule to give away in charity all fees obtained by his enforced professional work on Sundays. His well-known disposition was such that he was infrequently imposed on during the hurried hours of office consultations, and really brought to task by the managers of the various charities as they were established in the city, which did not unfortunately harden his heart to any tale of poverty and misery. To a very large number of his patients he was physician, lawyer, and spiritual adviser

and frequently his time was called upon in the latter capacity as freely as the former. But he was ever ready to listen and help. Hardly through the whole of his professional life did he ever sit down to a meal at his own house without interruption. To him his profession was above all things, and the care and relief of the sick and suffering his paramount duty. Yet no one more appreciated or enjoyed social engagements or family gatherings. He was a capital reader and very striking declaimer and actor. In early life he was very fond of the best plays, and many of the first actors were friends and patients of his father and himself. As far as the pressing duties of a most active life would allow, he kept himself well up with the literature of his profession, always when in his office having a book in his hand if not otherwise occupied.

Although Boston was not fifty years ago the crowded city it now is, yet Dr. Jeffries even then recognized that his family of young children needed to be out of town during the summer months, and in 1833 he built a cottage, still standing, on Noddle's Island point, when only two other houses were on what has now grown into East Boston. There he was accustomed to go on summer afternoons, and was a well-known character in his boat about the harbor and bay. But except in case of illness he never stayed away over night, always returning at nine o'clock to his house in Franklin Street, and seeing many a patient afterward. He thus got needed recreation without interruption to his professional work. Time has proved that he was right, and we see, one after another, overworked medical men forced to remove their families from the city in summer, and catch the hours when they can join them for their much-needed recreation.

Dr. Jeffries was for many years the intimate friend and confidential physician of Daniel Webster, and shared with him his love of shooting and fishing. He was with Mr. Webster through the whole of his last illness at Marshfield, and after his death built a shooting-lodge on a portion of land purchased from the estate, and then, as in former days at East Boston point, he only too infrequently sought relaxation from the fatigue of professional labor. Like his father before him, he was a most enthusiastic sportsman, but he never let this take him away from business or duty. When nearly eighty years of age, feeble and crippled by infirmities, he nevertheless insisted in going out fishing for, and catching, blue fish at Mattapoisett, where he passed his last summer.

To the medical profession he was most perfectly loyal. He always insisted on their rights, and ever strove to inculcate in the community the respect due them. He never from any motive allowed to pass, without remonstrance, fulsome praise of the licensed or unlicensed fashionable charlatan of the day. In his address at the first anniversary of the Suffolk District Medical Society, 1850, he showed that while there had been a

large abatement in the public mind of that reverence with which the educated physician and his prescriptions were once regarded, yet his claims to confidence had steadily augmented, and the profession, as a body, had never stood on so lofty an eminence for knowledge and integrity as then. In the spirit of this belief he acted from that time as long as he lived. Without anger or irritation, but with firmness and decision which carried weight, he argued and reasoned with his patients and the laity as to the folly and falsehood of the "isms" of the day in medicine. He was most thorough and clear in his own belief, and never swerved, whatever reputed authority supported this or that pretender or his cause. He detested imposture, in or out of the profession, and was ever ready to lend his aid fearlessly for its exposure. He had an innate respect for true science, and passed no more enjoyable hours than at the meetings of the Thursday Evening Club. His family always looked forward with pleasure to the clear and graphic accounts he gave them at the breakfast-table, the next morning, of what he had seen and heard among his scientific friends.

His religious belief was that of his father, and he was a devoted member of the Protestant Episcopal Church, working with his pastors at old Trinity and St. Paul's. This is not, of course, the place to speak of his long life's work in matters of religion. No man more thoroughly lived up to the warning he gently gave to his professional brethren in his address to them above noticed, when he said, "There is a danger that those engaged in investigating material things should forget the hand which brought them into existence; that while science is pushing its inquiries into the cause and manner of reproduction, and looking through matter for its vital principle, it will forget Him who breathes into it 'the breath of life.' Let us flee this danger by a cherished regard for a divine revelation. Let us labor in our profession with zeal and earnestness, as if success depended only on ourselves; and let us seek the counsel of the Great Physician as if the blessing was alone from Him, without whose aid

> 'Bethesda's baths would never heal,
> Nor Siloam's pool restore.'"

FORCE OF CILIARY MOTION.

BY H. P. BOWDITCH, M. D.,

Professor of Physiology, Harvard Medical School.

Most observers who have studied the movements of cilia have directed their attention to the evidence of ciliary activity afforded by the rapidity with which *very light* bodies are carried over the surface of the ciliated membrane. Thus Valentin[1] observed that the globules of

[1] Wagner's Lexicon, i. 506.

mucus on the gills of anodonta were carried forward at the rate of four m. m. in one minute. Engelmann,[1] in studying the various conditions which affect ciliary activity, made observations on the rapidity with which a small globule of sealing-wax, suspended by a light silk thread so as to merely touch the membrane, was moved forward over the ciliated surface. The rate varied in his observations from 7.8 to 24.5 m. m. in one minute. Calimburces,[2] also, in constructing his apparatus for measuring ciliary movement, made all the parts as light as possible, in order to reduce the work done by the cilia to a minimum.

The late Jeffries Wyman [3] was the first to call attention to the fact that the force exerted by cilia is by no means inconsiderable. He describes his experiments on frogs as follows: "The mucous membrane being carefully dissected from the roof of the mouth is pinned to a board. A piece of skin from near the throat of the frog, and from one third to half an inch square, is placed upon this membrane with the inner surface in contact with the cilia, it being kept in mind that these vibrate from before backwards towards the throat. On the skin may be placed a plate of lead of somewhat smaller size. This serves as a vehicle to which weights may be added at will to increase the load. . . . Pains should be taken to have the board on which the experiment is made perfectly horizontal, otherwise a sliding motion, especially when heavy weights are used, may come in to vitiate the experiment." The rate of movement was determined either by direct observation of the lead "vehicle" with its load, or by means of an index attached to the axle of the smaller of a pair of light cog-wheels, the "vehicle" being connected with the apparatus by means of a thread coiled round a drum on the axle of the larger wheel. By experiments performed in this way it was found that a weight of 1.3 grammes was carried fifteen m. m. in about one minute, the weight resting on a surface of twelve m. m. square, and that "forty-eight grammes, resting on a surface fourteen m. m. square, moved, though very slowly, across the whole length of the membrane; but the exact time was not noted."

It will be noticed that in these experiments the work done by the cilia consisted in overcoming the friction of the skin upon the membrane and of the parts of the index-apparatus on each other, and that the amount of this work, though increased by the addition of weights to the lead plate, was not, and could not well be, accurately determined. The weight being moved in a horizontal plane, there was no direct performance of work which could be measured by foot-pounds or kilogrammetres. In view, however, of the evidently very considerable force of the ciliary movement, it seemed important to determine the

[1] Flimmerbewegungen, page 70.
[2] American Naturalist, v. 611.
[3] Bernard, Les Tissues vivants, page 141.

maximum of work which could be performed in a given time by a given surface of ciliated membrane. The simplest way of accomplishing this object seemed to be to repeat Wyman's experiments, with the modification of giving to the board on which the membrane rested an inclination which would compel the cilia to move a weight resting upon them up an inclined plane. Then the product of the weight by the height through which it was lifted would give the value sought.

After several preliminary experiments an apparatus was constructed consisting of a piece of thin board about eleven c. m. square with a narrow strip of wood about seven m. m. in thickness, fastened at the middle of one edge. A strip of glass 4.5 c. m. long, by one c. m. broad, with edges smoothed on a grindstone, was firmly cemented by one end to the middle of the strip of wood, and thus projected over the surface of the board, parallel to, and 7 m. m. from it. A frog with brain and spinal cord destroyed was then prepared as follows: a transverse incision about one c. m. long, was made through the mucous membrane of the roof of the mouth as far forward as possible. The free end of the glass strip was inserted into this incision and pushed back between the membrane and the bones of the palate. The lower jaw was then cut away and the œsophagus laid open as far as the stomach. The cut edges of the œsophagus were kept extended by pins thrust through them into the board below. The frog thus lay upon the board with the body under the strip of glass and the ciliated membrane from the anterior edge of the palate to the stomach smoothly stretched over it and accessible to observation and experiment. A vehicle to be moved by the cilia was made by cementing a small oval piece of glass of 1.437 square c. m. area to a thin piece of wood of the same size. The glass surface was then covered with a piece of frog's skin stretched over it, with the inner surface outward, and held in place by a thread tied round it and lying in a groove cut in the edge of the wood. This vehicle, when placed with the skin downward upon the ciliated membrane, was readily carried along toward the stomach. The work done by the cilia could be increased either by placing weights upon the vehicle or by inclining the whole apparatus so that the vehicle should be carried up an inclined plane. The latter object was readily effected by means of a wedge pushed under the edge of the board opposite to the point where the glass strip was fastened. The wedge was so graduated that in every position it could be seen at a glance what proportion of the distance moved over by the vehicle was movement in a vertical direction. The movement of the vehicle was observed with a microscope of low power, furnished with an eye-piece micrometer. The draw-tube of the instrument was so adjusted that thirty divisions of the eye-piece micrometer corresponded to one m. m. in the field of vision. A stop-watch was used to determine the time occupied by a chosen point on the vehicle in passing over these thirty micrometer divisions.

It will thus be seen that the data of observation in our problem were as follows: —

a = grade per cent.; *i. e.*, the movement in a vertical direction expressed as a percentage of the distance moved, and determined by a simple observation of the position of the wedge.

b = weight in grammes of the vehicle and the load placed upon it.

c = time occupied by the vehicle in moving one m. m.

d = area in $\overline{c.\ m.}^2$ of the surface of the vehicle applied to the ciliated membrane.

The value to be determined by means of these observations was the amount of mechanical work, expressed in grammillimetres,[1] which was performed by one square centimetre of ciliated membrane in one minute. If we express this value by x we shall have the formula, —

$$x = \frac{a}{100} \times b \times \frac{60}{c} \times \frac{1}{d} = \frac{6\,ab}{10\,cd}$$

This formula expresses, of course, only the work done in raising the vehicle with its load. A certain amount of work is also performed in overcoming the friction of the vehicle on the membrane; but this amount is very difficult to determine, because the moving force is generated at the same point where the friction is applied. It is probably small in comparison with the work of raising the vehicle, and it was therefore disregarded.

A modification of the experiment consisted in placing the board in a perpendicular position, so that the vehicle, held in contact with the membrane by capillary attraction, was carried vertically upward. In this case $a = 100$, and the above formula becomes $x = \frac{60\,b}{c\,d}$. In order to obtain as great uniformity as possible in these observations, it was, of course, important to avoid drying of the membrane. For this purpose a 0.5 per cent. solution of common salt, made very slightly alkaline with sodic hydrate, was applied from time to time to the membrane. The results were nevertheless by no means so uniform as could be desired. The following table may serve as an example of the experiments. In this case the grade was at first kept constant at ten per cent., and weights of five, ten, and twenty grammes placed successively upon a vehicle weighing 0.534 gramme. Afterward the board was placed in a vertical position, and observations made on the rate at which the vehicle alone was carried upward.

It will be seen from the table, that by loading the vehicle the rapidity of its movement was diminished, but not in proportion to the increase of the weight. In other words, the greatest amount of work was obtained with the heaviest load. Thus the cilia, when compelled to carry a weight of 20.534 grammes up a grade of one in ten, performed in one minute for each square centimetre of surface, an amount of work equal

[1] This small unit of work was chosen merely for the sake of convenience in writing the results. It is, of course, one millionth of a kilogrammetre.

to 6.805 grammillimetres. This was the maximum of work obtained in upward of one hundred observations made with various weights and grades; but it is not probable that it is the maximum of work which cilia are capable of performing. It is perfectly possible that under somewhat different conditions they may work to much better advantage.

a. Grade. Per cent.	b. Weight. Grammes.	c. Time. Seconds	d. Area. c. m.^{2}	$x = \frac{6ab}{10cd}$ Grammillimetres.
10	10.534	10.8	1.437	4.074
10	10.534	7.4	1.437	5.940
10	20.534	15.	1.437	5.718
10	0.534	3.	1.437	0.743
10	5.534	5.6	1.437	4.127
10	5.534	5.	1.437	4.622
10	10.534	8.5	1.437	5.176
10	20.534	12.6	1.437	6.805
10	20.534	12.6	1.438	6.805
100	0.534	5.3	1.437	4.208
100	0.534	4 2	1.437	5.310
100	0.534	3.8	1.437	5.868
100	0.534	4.4	1.437	5.067
100	0.534	4.8	1.437	4.646
100	0.534	5.	1.437	4.460
100	0.534	5.	1.437	4.460

It will be noticed, for instance, in the above table, that, when carrying the unloaded vehicle vertically, they performed an amount of work nearly equal to the maximum obtained in carrying heavy weights up an inclined plane. It is not improbable that by altering the size, weight, or shape of the vehicle, conditions may be found under which the cilia may perform a greater amount of work than that here recorded. The investigation of this question will be the subject of a future series of experiments.

The statement that a ciliated membrane performs per square c. m. per minute, 6.805 grammillimetres of work, gives a very imperfect idea of the force of the moving cilia, unless we obtain a conception of the bulk of the organs where this force is generated. It is generally believed, though not absolutely demonstrated, that the force which moves the cilia is generated in the protoplasm of the ciliated cells. These cells in the frog's mouth are spherical in form, with the cilia upon one side. The average of nine measurements gave a diameter of 0.016 m. m., which agrees very well with Valentin's figures. If we imagine spherical cells of this size placed close together on the surface of the membrane, the volume of the cells on one square centimetre of surface will be 1.6 cubic millimetres and their weight, if we suppose them to have the specific gravity of water, will be 0.0016 gramme. Thus we see that a mass of protoplasm weighing 0.0016 gramme performs in one minute an amount of work equal to lifting 6.805 grammes

to the height of one millimetre. This is equal to lifting 0.0016 gramme to the height of 4253 millimetres. In other words, the ciliated cells perform in one minute an amount of work equal to lifting their own weight to the height of 4.253 metres. It is interesting to compare this value with that obtained for the striated muscles of the heart. The work performed by the heart at each pulsation is equal to the weight of the blood expelled by the contraction multiplied by the height of a column of blood which measures the tension in the aorta and pulmonary arteries. From these data Schiff[1] has estimated that the heart does in one minute an amount of work equal to lifting its own weight to the height of one hundred and fifty metres, a value more than thirty-five times as great as that above given for the ciliated epithelium.

RECENT PROGRESS IN THE TREATMENT OF CHILDREN'S DISEASES.[2]

BY D. H. HAYDEN, M. D.

On the Nutrient Properties of Leguminous Substances and their Value as Food for the Sick.[3] — As is well known, Professor Beneke, of Marburg, has reported very favorably upon the use of leguminous substances as a diet for infants and the sick.[4] At the same time he justly emphasizes the necessity of its administration in the form of powder reduced to the finest state of subdivision. In this form of finely divided powder, according to Beneke's statement, lentils and peas furnish a very easily digested food for the sick, which forms a marked contrast to the same substances when prepared in the usual way, as a soup, in which the peas are much swollen, but not disintegrated, and consequently difficult of digestion.

Induced by Professor Beneke's recommendations and following his suggestions, Herr Hartenstein, of Niederwiesa (Saxony), has placed in the market a preparation under the name "Leguminose," consisting of a "finely divided leguminous and cereal powder," there being four different mixtures, the nitrogenous matter standing in relation to the non-nitrogenous approximately as 1 : 2.3; 1 : 3.3; 1 : 3.9; 1 : 4.8. This preparation has been favorably spoken of by numerous medical men in Germany when employed in cases of catarrhal troubles of the stomach and intestines, especially in infants, in convalescence from typhoid fever, and in phthisis. Professor Beneke, also, in a second article,[5] A Word concerning Herr Hartenstein's Leguminose, has ex-

[1] Physiologie de la Digestion, i. 24.

[2] Concluded from page 146.

[3] Dr. Adolf Strümpell, Deutsches Archiv für klinische Medicin, December 17, 1875.

[4] Berliner klinische Wochenschrift, 1872, No. 15.

[5] Berliner klinische Wochenschrift, 1874, No. 22.

pressed himself in high terms of acknowledgment of Herr Hartenstein's preparation.

In consideration of the importance of the subject, at Professor F. Hofmann's instigation, the author has been conducting several experiments with the view of testing as far as possible the actual value of the leguminous substances as articles of diet. The *leguminosæ*, amongst all other vegetables, hold a high rank for the large amount of nitrogenous matter contained in them. This view of their value as nutritious substances is based more upon their chemical properties than upon experiments made upon man or the lower animals. Moleschott[1] from the point of view alone of the nitrogenous matter contained in the leguminosæ and in meat, characterizes the former as "a true source of treasure for restoring the blood," and considers "peas in the above point of view of equal value with veal, and the kidney-bean nearly equal to pigeon-meat. . . . Lentils are far ahead of every kind of meat."

Later experiments by Voit[2] and his pupils have taught us that in estimating the nutrient properties of different kinds of food, it is equally important, in addition to their chemical composition to take into consideration their facility of assimilation. In this respect is it that we find the great difference between animal and vegetable food; and to the disadvantage of the latter. The conditions for the absorption of vegetable food are much more unfavorable than for that of animal food; and for two reasons. In the first place, the vegetable matter ordinarily used as food is inclosed, at least for the most part, in envelopes of cellulose. These interfere with the necessary changes in the nutrient matter which they surround, owing to their own indigestibility and to the difficulty which they offer to the penetration of the digestive fluids. In consequence of this a large portion of the vegetable matter leaves the intestine unabsorbed. Further, E. Bischoff[3] has made it quite probable that a formation of an acid from the starch increases the peristaltic action of the intestines, and consequently causes a more rapid emptying of the intestinal contents.

The cellulose appears to have a similar effect upon the intestinal walls. F. Hofmann[4] has also shown that where cellulose is added to animal food, the amount of the latter found in the stools is considerably increased when compared to that found when animal food is taken alone. All these facts must be taken into consideration when forming judgment upon the value of vegetables as food.

F. Hofmann gave to a man 1000 grammes potatoes (2 lbs.), 207

[1] Physiology of Food, 1859.

[2] Voit on the Difference of Animal and Vegetable Diet; Sitzungsberichte der k. Bayr. Academie, 1869, ii. 4.

[3] Zeitschrift für Biologie, Band v., 1869, s. 452.

[4] Voit's work above quoted, page 6.

grammes lentils (5½ oz.), 40 grammes bread (1¼ oz.), and one quart of beer; he thus receiving daily 14.7 grammes nitrogen. There were passed in 116 grammes (8¾ oz.) dry fæces, 6.9 grammes nitrogen (106½ grains), *i. e.* forty-seven per cent. of the nitrogen contained in the food taken.

When the same person took a similar amount of nitrogen (14.7 grammes) in the form of meat (380 grammes), and in place of starch a corresponding amount of fat, the amount of fæces passed was only 28.8 grammes, containing 2.6 grammes nitrogen, *i. e.* 17.7 per cent. of the nitrogen contained in the food.

Gustav Meyer[1] found by experiments on a dog that when fed exclusively on bread, nineteen per cent. of the nitrogen taken with its food was passed away with the fæces; whereas when an equivalent of meat was given in its place, only eight per cent. remained unabsorbed. Experiments on men gave similar results. Where white bread was used the amount of nitrogen not assimilated amounted to 19.9 per cent., and increased with the use of coarse brown bread to 42.3 per cent. E. Bischoff had previously obtained similar figures. The fæces of a dog fed with 800 grammes of bread daily contained 15.9 per cent. of the nitrogen administered in the food. From experiments upon himself, J. Ranke[2] found that on a diet of meat, of the nitrogen introduced with the food, only 7.5 per cent. passed off in the stools.

There is only one work upon the use of leguminosæ as food known, that of Woroschiloff. He instituted a series of experiments as to the comparative value of peas and meat for purposes of nourishment. Whereas by meat diet the largest amount of nitrogen passed in the stools was ten per cent., in later experiments when the largest quantities were taken it only reached eight per cent., and when given in smaller amounts three per cent. On the contrary when a diet of peas was given, in the most favorable cases it reached ten per cent., at times 12.3 per cent., and in another series of experiments seventeen per cent.

The result of the above experiments is unfavorable to the assimilability of vegetable as compared with animal food. This result, however, does not equally apply to the preparation "leguminose," as in one case the vegetable food was firm in its ordinary form, and prepared in the ordinary way, whereas the other is a powder extremely finely divided, every particle of cellulose being carefully removed. To determine the value of this preparation special experiments alone will avail.

The author has carefully and minutely given an account of experiments instituted by himself to test the properties of this preparation, and to obtain data for judging of its value as an article of diet. Want of space compels us to omit the details and to give only the results of the experiments.

[1] Zeitschrift für Biologie, vii., 1871.
[2] Physiologie, zweite Aufl. s. 196.

The packets I. and II. of Hartenstein's preparations were employed. Each packet contains about one pound of a dry powder and costs 1½ marks (35 cents). Microscopical examination showed an entire absence of any coarse particles, and as far as minute subdivision of the powder was concerned, nothing better could be asked. Though it cannot be said with certainty what special forms of meal are used, on Professor Beneke's authority, there is every probability that it is the lentil from which the powder is made.

From chemical analysis it was found that the proportion of nitrogenous to non-nitrogenous matter in packet I. stood as 1: 2.9; in packet II. as 1: 5.4.

With regard to the manner of its preparation for use, the only one recommended has been in the form of a soup, — for each soup-plate full a heaping teaspoonful of the powder being added. Reckoning 25 grammes powder to a table-spoonful, and 300–350 grammes of fluid to a soup-plate, if, as is commonly accepted, 110–130 grammes albumen and about 400 grammes carbo-hydrate are needed as daily food for an adult, 600 grammes of packet I. would be required. To obtain this requisite, it would be necessary to take 24 soup-plates full daily, nearly 7200 cubic centimetres, or about seven quarts of soup, which of course would be something impossible. It is very easy to be deceived in judging of the amount of nutrient matter contained in a soup, especially if as in this case it is prepared thick. Twenty-five grammes, the amount of this preparation necessary for a soup-plate full of the soup, in the amount of albumen it contains, corresponds nearly to 30 grammes meat, *i. e.*, to about one quarter of an ordinary beef-steak.

Another very important point to be considered is the taste of the soup. Prepared in the ordinary way with water and salt, with a small quantity of beef-extract in addition, it is not exactly unpleasant, and yet one soon gets an aversion to it. The taste can be better described as being stale, and the small amount of extract of beef added does not conceal it. The consistency of the soup, too, would prevent its being used in very large amount. It is a well known fact that after a while one becomes disgusted with all preparations of a mushy consistency if taken in large quantities.

The above impediment to the exclusive use of the leguminose as food was in the author's experience insuperable. The amount that he was able to use in the twenty-four hours was so small that he found himself compelled to add other substances, as eggs, butter, and milk, with the idea of thus being able to take larger quantities in the form of a cake. Prepared in this way the powers of assimilation proved to be good, there being only 8.2 per cent. of the nitrogen that passed off unabsorbed in the stools. During the use of this preparation the amylaceous portion was entirely absorbed, at least there was no starch or

sugar to be found in the stools. It was also noticed that during the days of the experiment there was no development of gas in the intestines to any amount.

The author therefore acknowledges the easy digestibility and the nutrient value of this preparation; the facility of assimilation and absorption are good; while slightly inferior to meat, it is much superior to bread as food. A great objection, however, must always remain, namely, the impossibility of its being taken in large quantity, due partly to the inconvenient form in which it has to be taken as a soup, but principally to the unpleasant taste which creates rapidly an insuperable aversion. From a purely chemical point of view Professor Beneke is right when he ascribes a higher value to these preparations than to meat; from a physiological point of view he is wrong. We are easily able to take daily the requisite amount of animal food (614 grammes, Moleschott), whereas to take the equivalent of leguminose (600 grammes), according to the author's experience would be an absolute impossibility. What then is to be thought in the case of a sick person whose appetite is impaired?

With patients who are unable to take a requisite amount of nourishment, especially in cases of great irritability of the stomach and intestines where small quantities of solid food cause vomiting or diarrhœa, a point is gained if we can in such cases find a food that can be taken in any quantity, however small. For such cases the leguminose is admirably adapted, and in form of soup. Its use is much more rational than the ordinary prescription of oat-meal gruel or barley-water. It is very desirable, when possible, to order its preparation with milk instead of water, as this also renders the taste more acceptable. In stenosis of the œsophagus and similar affections, this soup is well adapted; also in cases of feeding with the stomach-tubes. In all these cases we must not allow ourselves to be deceived as to the actual value of the leguminose as a nutrient. Prepared as above, a soup-plate contains only six grammes (℥iss) albumen; when milk also is used we get in addition twenty grammes more albumen.

The great merit, therefore, of the leguminose consists in the minute subdivision of the powder and its absolute freedom from all cellulose. As a result of experiments to test the comparative digestibility of peas and lentils when prepared in the ordinary way by standing over night in water and then being boiled in a meat soup, with that of the preparation of leguminose, it was found that in the former case forty per cent. of the nitrogen appeared in the stools, being nearly four times the quantity when, instead of the ordinary pea soup, leguminose is used.

The author reminds his readers that lentils should not be cooked in hard water. Twenty-five grammes lentils cooked with five hundred cubic centimetres distilled water one and one half hours take up 45.1 grammes water and become soft and eatable. The same amount in an

equal quantity of water in which previously 0.25 gramme sulphate of lime was dissolved, cooked the same time, took up only twenty-five grammes water. In the preparation of leguminose for soup, the character of the water should always be previously ascertained.

The experiments were carried out in Professor Hofmann's laboratory, for whose assistance and that of Dr. C. Flügger the author expresses great indebtedness.

Chronic Pneumonia of the Apex in Children. — Dr. L. Fleischmann[1] speaks of the frequency of this disease and the manifold difficulties attending an early accurate diagnosis. Such are the small extent of the infiltration, which is limited to the apex, and is often to be recognized only after repeated careful examinations; the frequent absence of marked physical signs, cough and sputa; and finally, the difficulty of examining a young, restless infant. The symptoms which we usually find in incipient phthisis in adults, such as cough, hæmoptysis, palpitations, anæmia and sinking in of the chest-wall, are absolutely wanting, or if present we are then dealing with a long-standing infiltration, not with a commencing disease.

In observing teething children the author has noticed the following symptoms which have led him to recognize or to suspect chronic pneumonia of the apex at an early stage.

(1.) One-sided swelling of the lymphatic glands of the throat, back of the neck or of the sub-maxillary region, when other local causes, such as pharyngitis, parotitis, alveolar inflammation, and diphtheria can be excluded, causes strong suspicion that there is pneumonia of the apex on the same side. The glandular swelling continues while the process in the lung is active, and ceases when the lung infiltrations become stationary, the glands swelling and subsiding again with each advance of the inflammation. Such glands have been usually called scrofulous.

In enlargement of the glands before and behind the ear, the former is often due to inflammations of the eye, the latter to that of the ear.

Children over six years old do not show so marked a tendency to glandular enlargement.

(2.) Certain obstinate forms of conjunctivitis (scrofulosa), which in spite of all treatment and without apparent cause, return from time to time with great severity, if but one and always the same eye is attacked, point with great probability to disease of the lung of the same side.

(3.) Eczema of one half of the face or head, which heals with difficulty and frequently recurs, sometimes alternating with or accompanied by ophthalmia of the same side, should lead to examinations of the lungs, where pneumonia of the apex of the same side is often present.

(4.) Certain sympathetic disturbances of one side of the face or head, namely, frequent changes in color from flushing to pallor, transitory cir-

[1] Wiener med. Presse, No. 20, 1876, and Allgemeine medicinische Central-Zeitung, No. 41.

cumscribed erythema of the cheek or temple, always on the same side, the easy production of Trousseau's maculæ, which also accompany meningitis, cerebral tumors, and other diseases to be excluded, often indicate pneumonia of the apex of the same side.

In several cases of brain tumors which the author has lately observed, he has found lung infiltration on the same side with the brain tubercles.

(5.) Intermittent sympathetic neuroses affecting one side of the head, characterized by redness and elevation of the temperature of the skin of the affected side, are often observed in children with lung infiltrations of the same side. The red and hot ear presents the same phenomena as those noticed in animals after cutting the sympathetic of one side.

(6.) Finally, neuralgias of the trigeminus, oculo-motorius, and vagus occurred and disappeared during the process in the lung of the same side in such a manner that no certain relation between the two could be determined.

All the above mentioned symptoms and appearances were observed by the author in a large number of cases; so he concludes that the probability of simple coincidence is inadmissible.

The ways by which these concomitant affections are conducted are through both the lymphatics and the sympathetic.

The author intends to give the more minute details in an extended work, and wished by these preliminary communications to lay claims to priority in such valuable and interesting observations.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

O. W. DOE, M. D., SECRETARY.

MAY 15th. *Lithotrity.* — DR. T. B. CURTIS read the regular paper for the evening, the subject being lithotrity, of which two cases were reported in full, with remarks.

CASE I. A man aged fifty-four, first seen in January, 1875, had multiple uric calculi, the largest being nearly an inch in diameter, two others measuring about half an inch. Subacute cystitis, urine acid, bladder fairly tolerant, good general health, no tendency to febrile disturbance. Ten sittings of lithotrity, taking place from February 8th to March 26th, sufficed, each sitting lasting between two and three minutes. No attack of acute cystitis or of urethral fever occurred.

At the end of March the patient experienced a most painful attack of kidney colic, and seed-like calculi of uric acid were occasionally passed. To counteract the lithæmic condition so evidenced, an alkaline treatment was instituted. In December, eight months after the last sitting, symptoms of vesical calculus having recurred, a small phosphatic stone of one half inch diameter was found

to have formed around a uric nucleus. This was crushed and evacuated in four sittings. Again in March, 1876, some signs of vesical irritation being again present, the patient was sounded, and a small phosphatic concretion was disposed of in one sitting. From that time the patient has remained free of stone.

Case II. The patient, aged seventy years, first seen June 24, 1875, of exceptionally robust constitution, experienced his first urinary symptoms about two years ago. Urine acid, not offensive; subacute cystitis, with pus and blood in moderate amount. The patient emptied his bladder; the introduction of instruments was easy and well borne; no tendency to feverish attacks existed. The stone, of uric acid, had a diameter of about one inch. Only one circumstance appeared unfavorable for lithotrity: the bladder, though healthy and sufficiently spacious, was unusually irritable, expelling its contents as soon as any instrument, sound, or lithotrite was introduced. The patient, however, was decidedly averse to any other treatment than crushing, and, as his condition appeared in all other respects very favorable, lithotrity was decided upon, with the expectation that the bladder would gradually become accustomed to the manœuvres of the lithotrite, and so be rendered more tolerant. The treatment was well borne; but after a few sittings three circumstances of an unfavorable nature developed themselves, and continued to cause great difficulty throughout the entire duration of the case.

In the first place the patient, who at first bore anæsthesia quite well, turned out to be very refractory to etherization; he gave so much trouble by ceaseless and violent coughing, with severe asphyxic symptoms, that after the fifth sitting anæsthesia had to be abandoned. Secondly, the stone turned out to be larger than had been supposed from the initial measurement with the lithotrite. Thirdly, the bladder retained its exaggerated functional irritability throughout the entire duration of the treatment, which comprised in all thirty-five sittings. At the last sittings, as at the first, just as soon as the lithotrite, having entered the bladder, was being opened, the accumulated urine would be ejected alongside the instrument, none being left behind; warm water carefully injected would invariably escape in the same way. It was hoped that the bladder would in time become accustomed to the manœuvres of lithotrity, and so be rendered gradually more tolerant and capable of retaining fluid, as Civiale and other authorities assert to be generally the case; but even at the last exploratory introductions of the sound and lithotrite, when all traces of calculus had disappeared, the bladder continued to empty itself completely by the side of the inlying instrument, and a catheter introduced immediately afterward always showed that not a drop of urine remained. This unfortunate *contre-temps* occurred under all circumstances, with as well as without ether, opium by suppositories as well as subcutaneously proving of no avail as a preventive; nor by a course of injections of warm water was it possible to train the bladder to retain its contents. At the beginning of the treatment, while the stone and its fragments were still large, this condition was the source of great difficulties, and at several sittings all attempts to seize the stone were fruitless. But by dint of great care and gentleness, and thanks to the patience and pluck of the patient, the fragments were finally reduced in size and partially evac-

uated, and it was then no longer difficult to work in a quite satisfactory way in the empty bladder. In spite of this unfavorable state of things the sittings were hardly ever attended by the slightest trace of hæmorrhage, the water during and after the sittings issuing untinged by blood; no increase of cystitis occurred; nor did the patient ever experience any marked febrile disturbance. His temperature was observed throughout, and only twice slightly exceeded the normal. He was able to be out in the open air daily throughout the duration of the treatment, taking occasionally quite long walks. At times the sittings were repeated every other day, and even then the patient rarely missed his daily walk, thus wholly escaping the prolonged confinement which is often so detrimental in advanced age, and which is one of the disadvantages of lithotrity.

Thirty-five sittings took place, at the end of which the bladder was found to be free of any remains of the calculus. Since the termination of the treatment the patient has enjoyed remarkably good health, the urine being quite clear and the bladder free from pain or irritability.

After reading the reports of the cases, which are here given in abstract, Dr. Curtis described in detail the *modus operandi*, and then added a few remarks relating to certain points of particular interest. With reference to the advisability of attempting to perform lithotrity in an empty bladder, he said that with regard to his second case the question arose whether lithotomy might not have been the proper treatment, supposing the consent of the patient to have been obtainable. Certainly such a condition of uncontrollable vesical intolerance as here existed is said by many of the best authorities to be a contra-indication to lithotrity; and this unfavorable condition, together with the size of the stone and the unfitness of the patient for etherization, was the source of great difficulty, delay, and anxiety in the pursuance of the treatment. But, on the other hand, the great dangers of lithotomy at the advanced age of the patient must be taken into account. Sir W. Fergusson's and Sir H. Thompson's statistics show that at the age of seventy the mortality of lithotomy exceeds thirty per centum.

But is it so indispensable, as has been said by nearly all our authorities on the subject, that the bladder should contain fluid during lithotrity? Is the inability of the bladder to retain urine or water during the operation necessarily an absolute contra-indication to the crushing operation? On this point there is room for doubt. In the first place we know that one of the bugbears of lithotrity, when the operation was new, was the fear of nipping the wall of the bladder; and it was to avoid this danger that anæsthesia was abstained from and that large quantities of fluid in the bladder were considered necessary. The danger of seizing the bladder-wall we now know to be imaginary. In fact, it would probably be very difficult to get hold of the bladder at all with a properly constructed lithotrite, if one were to try to do so. In the next place, several surgeons of the greatest experience in the practice of lithotrity, appear to be quite doubtful as to the real necessity of the presence of fluid in the bladder. Sir B. Brodie says: "Although, as has been just observed, the operation should never be attempted without the bladder having been previously distended with tepid water, it is worthy of notice that it has occurred to me sometimes to find

that during the operation the whole of the water which had been injected had escaped by the urethra without my being aware of the circumstance, so that many fragments must have been crushed in an otherwise empty bladder. On such occasions I have always been apprehensive lest some ill consequences should ensue. It is true that this did not happen in any one instance; still it is a thing that ought to be carefully avoided, as it is plain that any but the most careful manipulation would be dangerous under these circumstances." Sir W. Fergusson and Sir H. Thompson both habitually dispense with any preliminary injection, and appear to attach very little importance to the presence of urine at the moment of operating. In fact, Sir H. Thompson has no objection to operating in an empty bladder, though he usually takes precautions in view of securing the presence of a small quantity of urine. He says: "Perhaps three or four ounces may, as a rule, be always present with advantage, especially for young operators. Nevertheless, I am bound to say that with instruments constructed on the principles laid down, no mischief can be done by proper manipulation in the empty bladder; and for myself, I as frequently operate in that condition as not." The reader said that he had seen Sir H. Thompson, while practicing lithotrity, draw off with a catheter the little urine contained in the bladder, in order to get at the fragments more easily. Dr. Curtis expressed his belief that inability of the bladder to retain fluid was only a positive contra-indication to lithotrity when due to thickening and contraction of the bladder-wall; but that a condition of mere functional irritability, consisting in a readiness of a tolerably healthy bladder to expel its fluid contents by reflex contraction, under the stimulus of instrumental manœuvres, need not be a bar to the successful performance of lithotrity, even with a stone of moderate size. Such a condition is, however, obviously a source of difficulty and of danger, and makes it necessary for the operator to be exceedingly careful and gentle in order to avoid causing acute cystitis by rough manipulation or by unduly protracted sittings.

Dr. Fifield said that "Dr. Curtis had spoken of carrying the lithotrite directly to the calculus instead of leading the calculus to the instrument. He thought that the idea of Dr. Curtis should be clearly understood.

"The English school, as represented by Brodie, Pirrie, and others, give but one method of seizing the stone, namely, by sliding the female blade directly to the posterior surface of the bladder, and depressing this portion of the walls with it, when the calculus falls between the jaws by the sole effect of gravity. Pirrie, for example, gives no other direction than this. Bryant declares his approval of this process, originally taught, he claims, by Aston Key. Now the French school teach at least six different manœuvres for grasping the stone. For the performance of any one of these, the first requisites are the detection of the stone and judgment of its situation by the sense of touch (to the exclusion of the sense of hearing), using the lithotrite in a limited sense as a sound. Secondly, the turning of the lithotrite to the opposite of the place of the stone, opening of the instrument, return to the calculus, and seizure. In the first manœuvre, both English and French surgeons agree as to the depression of the wall of the bladder, but the French place less importance upon this, as the first requisite of finding the stone with the closed lithotrite gives

the certainty of its position, when a scarcely perceptible depression allows the stone to fall within the blades. Thus one does not exactly carry the open lithotrite to the calculus, but the operation demands two movements."

In regard to the instruments shown, one flat-beaked (B) by Weiss, and one by Robert et Colin, also flat-beaked, *écrou brisé*, Dr. Fifield agreed with Dr. Curtis in commending, but thought from what he had seen of the latter instrument in the hands of a most competent lithotritist at Necker, that the concavity of the beak might become so clogged with *débris* that the power of the screw would scarce suffice to expel them. He thought that the fenestrated beaks of Réliquet's lithotrites, into which the sharp steel *arêtes* of the male blades fit and project a little, the better instrument.

Dr. Fifield also spoke in terms of high praise of the most ingenious *lit de Réliquet*, by which a patient's pelvis is raised to any desirable height, inclined to either side, or may have a quick rocking motion imparted to it. It is extremely portable, and could be placed flat under a patient in bed, whose pelvis is then raised upon it without jar or exertion, no matter how heavy or feeble he may be.

Dr. Fifield also agreed with Dr. Curtis as to the impropriety of attempting to remove fragments of calculi in the concavity of the lithotrite. For the removal of such fragments he commended the plan of M. Réliquet, the eminent lithotritist and lithotomist of Paris. "This consists in placing a thin board beneath the patient as he lies in bed, passing a large catheter with a long and wide eye. Through this is thrown by a graduated syringe a stream of water, whose return brings with it the fragmentary particles. To insure against any fragment sticking in the fenestra of the instrument, a rod of steel, the full size of the catheter, and rendered extremely flexible (although in appearance solid) by being cut in spirals, is passed to the extremity of the catheter. It so completely fills it that any bit of gravel in the fenestra is at once extruded into the bladder. M. Réliquet has found a way of bringing out safely from the urethra a fragment which is too large to pass, or which may be too sharp in its angles to be pushed back to the bladder, or when one for any reason does not wish to seek it with the urethral forceps or curette. It is by passing his large catheter down to the fragment, injecting, and continuing to inject, water without interruption of the stream, whilst the catheter is gradually withdrawn, the fragment directly following it."

Dr. Edes asked if it was advisable to give alkaline solvents with a view to effecting the solution of the uric acid calculi.

Dr. Curtis answered that his object in administering alkaline remedies, namely, carbonate of lithia and bicarbonate of potassium, was to prevent the further formation of uric calculus; that he had little faith in the powers of alkaline treatment to dissolve an already formed calculus.

Dr. Jeffries inquired if any success attended the attempt made by an American to manufacture an instrument which could be introduced into the bladder and so isolate the calculus that it might be acted upon locally by solvents.

Dr. Curtis replied that he had heard of such an instrument being made, but had never known of any good result being derived from it.

Dr. Jeffries asked if recontraction of the slit meatus was apt to take place.

Dr. Curtis answered that in such cases the incision was kept open by the instruments, which were subsequently passed through it, and that it remained permanently patent.

Macro-Microscopical Sections of the Brain. — Dr. Denny, by invitation, showed some macro-microscopical sections of the brain, recently prepared by him in Vienna. They were colored with carmine, and so mounted that they could be examined by transmitted light. The specimens were very numerous, and comprised many sections made through the whole brain.

Dr. Fitz inquired as to the method of preparing the specimens.

Dr. Denny said that the brain, after removal of all enveloping tissues and vessels, is placed in common alcohol, where it remains about ten days, when absolute alcohol is substituted, to which tincture of iodine is added until the liquid is of the color of Madeira wine. It remains in this solution, which is frequently changed, also about ten days, when it is transferred to a saturated solution of bichromate of potash.

A human brain requires about two years before it is properly hardened, though the medulla, pons with the ganglia attached, and the brain of dogs, monkeys, and the fœtal brain may be hardened in three or four months.

To embed the brain in the cylinder of the microtome, it is to be dried and set in the desired position in a warm, flowing mass of stearine fifteen parts, lard twelve parts, and white wax one part, melted together. On cooling, it is liable to shrink, and it is well to pour into the space thus contracted a solution of crude turpentine and wax melted together. The basin surrounding the cylinder is filled with water, and the sections are then cut under water. The cut section is placed in water and allowed to remain some hours; it is then removed to a solution of carmine quite free from the odor of ammonia, and after twelve hours it is transferred to water slightly acidulated with acetic acid. After remaining over night in this liquid, it is transferred to common alcohol and then to absolute alcohol, remaining about an hour in each. It is then removed to the glass, and, when the alcohol is evaporated, it is penciled over with oil of cloves. When this is carefully done, so that there shall be no superfluous oil, Dammar lac is then poured over, and the upper glass adjusted. This should remain level one or two days, then, after removing the old superfluous Dammar lac from the edges, a thin layer of melted wax is laid with a brush over the edges, and when cool, over this again a preparation of asphalt in ether. Dr. Denny added that in his specimens, after the above preparation, he applied also a solution of caoutchouc in chloroform over the edges, and then covered both edges and sides with white wax. Oil of turpentine exposed to the air until it becomes thick may be used to render the specimen transparent instead of cloves.

Dr. Fitz inquired if Meynert cut with a free hand or with the microtome.

Dr. Denny answered, with the free hand.

Dr. Fitz asked if the details of the structure were well preserved in specimens hardened by this method.

Dr. Denny thought they were preserved much better than in alcohol alone, as in the latter the specimen became shrunken.

Chylous Urine. — Dr. Wood showed a specimen of chylous urine, and gave the following history of the case. The patient is a native of Cuba, but has not resided there for twelve or thirteen years. His father was operated on twice by Sir Henry Thompson for stone, and his grandfather died of gout.

In June, 1874, he had scarlatina, followed by nephritis. During convalescence from this he was upset in a wherry, and cystitis, according to his report, supervened. After the cystitis, the patient passed milky urine for about three weeks, when this condition of the urine disappeared spontaneously. Shortly afterward it reappeared, lasted about a month, and again ceased. In July, 1875, the milky urine again appeared, and has continued up to the present time. The appearance of the urine is milky. A large amount is passed. It has a specific gravity of from 1008 to 1013, and the sediment contains blood and leucocytes. The fat can be seen under the microscope, not in the form of globules, but as extremely minute amorphous particles, which do not perceptibly diminish the light. There is more blood and more fat after meals than before. At times the urine is perfectly clear before meals. The amount of fat in one specimen of morning urine was about one half per cent., and the amount of albumen in the same specimen was also about one half per cent. The pain is located chiefly in the region of the bladder, rectum, and perinæum. There are enlarged glands in the groin. Dr. Wood added that the specimen of chylous urine shown differed from many in not being spontaneously coagulable, although there appear to have been coagula twice, so that the patient was obliged to pass a catheter. In answer to the inquiry of Dr. Edes as to the presence of casts, Dr. Wood replied that they had never been found.

Dr. Curtis asked if clear urine after fasting was albuminous.

Dr. Wood answered that he had never observed it, but thought it would be found so.

Dr. Chadwick inquired as to the pathology of the disease.

Dr. Wood replied that it was considered by Roberts to be a disease, probably hypertrophy, of the lymphatics in some portion of the urinary tract; in this case probably the bladder, as all the symptoms were referable to that region.

Dr. Fitz mentioned one case where it was found to be associated with dilated lymphatics of the scrotum.

Dr. Wood referred to two cases of diseased lymphatics of the skin, reported by Roberts, one that of the abdomen and the other that of the scrotum, in both of which a fluid similar in appearance to that of chyle exuded through the lymphatics, which were hypertrophied.

Salicylic Acid and Salicin in Urine. — Dr. Edes called the attention of the society to the similarity in the reaction of two specimens of urine, one that of a patient taking salicin and the other that of a patient taking salicylic acid, when treated with the salts of iron, each giving an intense dark-purple color. The reaction being the same, he intended to try the effects of salicin in rheumatism, giving it in doses of ten grains often repeated.

Stricture of Large Intestine. — Dr. Edes showed a specimen of stricture of

the large intestine, scarcely admitting the little finger, the stricture taking place at the point where the intestine turns over the brim of the pelvis. The patient, a female, entered the City Hospital on account of vomiting, attended with tympanitic distention of the abdomen so great as to require puncture twice for the relief of the tympanites. Dr. Edes remarked that he had once before met with a similar case.

Dr. Chadwick inquired if there was any specific history, and also if any peritonitic adhesions were found at the autopsy.

Dr. Edes replied to both questions in the negative, adding that there was some slight recent peritonitis, which he thought might have arisen from the punctures.

Dr. Chadwick remarked that stricture of the intestine in this part, resulting from peritonitic effusion, was not, he thought, an uncommon condition in women.

Dr. Edes said there was no evidence in his cases that the stricture was produced by old peritonitis.

Dr. Fitz asked if the stricture was at the sigmoid flexure; if so, there might be a suspicion of its being of a cancerous nature, as cancer usually affects that portion of the intestine.

Dr. Edes replied that it seemed to be below that point, and added that there were no enlarged glands or other indications leading one to suspect cancer.

THE FISHER CASE.

We give a brief *résumé* of the facts of this case, which many of our readers will recognize as the one recently referred to where death occurred during the administration of ether. The patient, a young school-teacher, had suffered for two years or more from dysmenorrhœa, and had been treated by a number of physicians without relief. A few months since she placed herself under the care of Dr. Sinclair, who recommended an incision of the os with the hope of thus effectually relieving a painful and obstinate affection. The operation was postponed until the summer vacation, when the patient would be able to give a proper amount of time to convalescence. Accordingly, early in July, the patient was seen again, but was advised to wait until the approaching catamenia had passed. They having ceased on the 15th, the operation was performed at the private hospital of Mrs. Ware on the 19th. Ether was administered, and the patient was then placed in Simms's position, the ether towel now being intrusted to a female attendant. Dr. Vogel, who assisted Dr. Sinclair at the operation, felt of the pulse soon after the operation had been begun, and found that it had ceased to beat. Breathing had ceased also, and in spite of all efforts made, the patient could not be resuscitated.

The first information which the profession and the public received of this case was that an inquest had been ordered for the purpose of determining, not whether a correct return had been made as to the cause of death, but whether an attempt had been made to procure an abortion. We need hardly say that the professional public attached no weight to the rumors and suspicions mys-

teriously circulated at that time. We shall refer, therefore, to but one or two points in the testimony given at the inquest. The autopsy, performed by Dr. Treadwell, showed, in addition to Bright's disease, a chronic pleurisy on one side of the chest, and an engorgement of the pulmonary artery, indicating that death resulted from asphyxia. The testimony on the condition of the ovaries and uterus pointing to a miscarriage at some time previous to the operation, we refer to below. The jury found "that the said Clara T. Fisher came to her death on Wednesday, July 19, 1876, at about between the hours of eleven and twelve o'clock A. M., at No. 4 Ferdinand Street, in Boston, by reason of suffocation, caused by the administration of sulphuric ether for a simple surgical operation, under the direction of Dr. A. D. Sinclair, assisted by Dr. Frederick W. Vogel; and the jury further find that, in their opinion, there was a lack of caution in said administration of ether, in not allowing a due quantity of atmospheric air to pass to the lungs of the patient during the etherization; and the jury are also of the opinion that there was a too hasty abandonment of the means for the resuscitation of the patient, and that the diseased condition of the patient may have contributed, in some slight degree, to her death."

Although it may be said that the jury could hardly arrive at any other opinion from the testimony as reported, excepting perhaps that referring to means taken for resuscitation, we feel sure that the professional verdict would exculpate a physician of Dr. Sinclair's high standing from any want of ordinary care in handling a case of this sort. The great superiority of ether over chloroform in point of safety has, we think, engendered among many physicians a certain want of appreciation of the amount of care necessary to be employed in the use of this, as indeed of any, powerful agent. A feeling of too great security, followed by the inevitable calamity, frequently places the blame where it is undeserved. It is not the individual or the agent, but custom, which is at fault. With precautions such as should always be taken, and which, undoubtedly, a large number of physicians think unnecessary, the warning signals will always be displayed in ample time to avert impending danger.

THE MEDICO-LEGAL VALUE OF THE TRUE CORPUS LUTEUM.

THE question as to the preëxistence of pregnancy in the case above referred to is one which we are no more called upon to consider than were the coroner or the jury. The fact that they were willing to receive evidence bearing on a question in no possible way connected with the case, is no reason why we should take any part in a discussion the merits of which are already being freely criticised by a sympathizing public in a manner which reflects but little credit upon the coroner who conducted the inquest.

One statement, however, in the medical testimony, seems deserving of criticism. In his account of the autopsy, Dr. J. B. Treadwell stated that "there was a corpus luteum — true — in the right ovary, about three-fourths of an inch in length. Its wall was thick and congested, and of a light yellow color. There was a small cyst at its centre. The central portion, except the cyst, was firm

and of a yellowish color, less bright than that of its wall." In his subsequent testimony he said that the presence of a true corpus luteum in the ovary was a sure sign of pregnancy, and one about which there could be no doubt whatever.

While we would admit that a true corpus luteum is, as a rule, found in the ovary following conception, it seems evident that, like all rules, there are exceptions.

In 1840 Négrier [1] took the ground that a corpus luteum following conception did not differ from that which follows menstruation. In 1842 Dr. F. A. Pouchet [2] summed up the account of a series of observations with the statement that "whether the ovule which they (corpora lutea) have expelled does or does not become fecundated, whether or not it undergoes the transformation into an embryo, all have, nevertheless, the same form and the same structure." In a letter to the French Academy, under date of July 17, 1843, Professor Bischoff writes that the true corpora lutea may be produced independently of impregnation, and that therefore they cannot be received as proofs of pregnancy, since they are not connected necessarily with conception. The same year Dr. Knox,[3] after giving the account of a number of observations made upon animals, writes that occasionally there is no distinctive characteristic by which the corpus luteum (true) can be distinguished from the menstrual one.

The following year Dr. Wharton Jones,[4] in connection with the account of a careful dissection he had made, says: "Though physiologically we may be permitted to speculate . . . . on the relation between the occurrence of corpora lutea in the ovaries and a preceding coitus, it would be rash and unwarrantable in any one to pronounce positively from the occurrence of a corpus luteum in the ovaries, that coitus had taken place. The discovery of an ovum in the uterus, in process of development, could alone, in the present state of knowledge, warrant such an affirmation in a court of law."

It will thus be seen that even prior to 1850, many good observers declared positively against the value of a true corpus luteum as a sure proof of pregnancy. In 1851 Prof. J. C. Dalton wrote a Prize Essay on the Corpus Luteum of Menstruation and Pregnancy. In this paper he took decided ground that the true corpus luteum was a sure evidence of a preëxisting pregnancy.

Alluding to the observation made by Négrier, he dismissed any discussion of the cases cited by that writer with the remark that his "account is somewhat complicated, and, moreover, entirely opposed to the views entertained by *most other writers.*" (The italics are our own.) Since that time considerable attention has been given to the subject, and the views first clearly advanced by Professor Dalton have come to be considered as greatly adding to the value of the true corpus luteum as a sign of pregnancy.

The subject is, however, still *sub judice*, and many authorities upon the subject are unwilling to admit the fact that the presence of the true corpus luteum is an infallible sign of a loss of virginity.

Dr. Wm. T. Benham [5] reports a very interesting case in which he made

[1] Recherches anatomiques et physiologiques sur les Ovaries dans l'Espèce humaine.
[2] Théorie positive de la Fécondation.
[3] Medical Gazette, xxxiii. 371.
[4] Medical Gazette, xxxiv. 623.
[5] Edinburgh Medical Journal, August, 1873, page 127.

an autopsy upon a young girl, an inmate of the British (England) Lunatic Asylum, who had been under observation for nine years. She died suddenly during an epileptic seizure, while menstruating. At the autopsy a well-marked true corpus luteum was found in the left ovary. The uterus was found to be a virgin one, and in its cavity was an unimpregnated ovum.

With this case before us, and in face of the strong statements made by the writers already alluded to, it seems to us that the opinion given at the inquest above referred to was too strong, although sustained by such observers as Lee, Montgomery, Müller, Dalton, Cazeaux, and others, and that an opinion should have been given that the presence of a true corpus luteum was a strong presumptive, but not positive proof of pregnancy.

MEDICAL NOTES.

— At a meeting of the trustees of the Massachusetts General Hospital, held on Friday, August 4th, Dr. J. H. Whittemore, assistant physician to the McLean Asylum, was elected resident physician to the Massachusetts General Hospital.

— *The Medical Record* of July 8, 1876, contains an account of an ununited fracture of the upper end of the fibula. The account given by E. D. Merriam, M. D., of Conneaut, Ohio, who sustained the fracture in his own person, is as follows : —

"The injury occurred by being capsized while riding in my covered buggy, and being dragged underneath it a short distance, my legs being on the ground wrapped in a buffalo-robe. When finally released from the buggy, I found I had sustained a fracture of the leg. It proved to be a transverse fracture of the tibia just below the tubercle, one and one-half inches below joint of knee, near attachment of the ligamentum patellæ, and of the fibula about one inch below its head. It is nine weeks since the accident occurred. I am about on crutches, with a good tibia, but the deformity and disability consists in the fact that the superior fragment of the fibula, with the biceps attached, is drawn upward and inward, so that it lies across the under side of the knee. The head of the fibula seems to rest upon its articulating surface, while its inferior extremity is drawn upward and inward, and is loose and movable. This dislocation of the head of the fibula was not diagnosed at the time of dressing the fracture by the attending surgeon, and in fact I do not know that anything could have been done to overcome the power of the biceps on such a short fragment. The consequence is a loss of the fullness and prominence of the external hamstrings, and weakness of external part of knee, being inclined to easily turn out. The superior extremity, inferior fragment of fibula, seems to be attached by bony union to tibia at seat of fracture, having a depression between that and the superior fragment. I am able to rest my foot upon the floor, but bear no weight upon it. There has also been a paralysis of the extensors of foot and toes, with extreme sensitiveness or hyperæsthesia of dorsum of foot and toes, which still continues.

"There has been no appearance of bruise or injury to the anterior surface of the limb, but my foot droops and toes drag."

Professor F. H. Hamilton, to whom the history of the case was sent by Dr. Merriam, says, —

"The fracture of both bones of the leg at this point is unusual. The refusal of the fibula to unite, on account of the contraction of the biceps, suggests the propriety of flexing the leg in treating such a fracture, or of dividing the biceps at once.

"The hyperæsthesia, pain, and paralysis of certain portions of the foot is plainly due to some injury inflicted upon the external popliteal nerve, probably by the pressure of the upper fragment; and I have said to the doctor that the biceps ought to be divided, or the upper fragment of the fibula dissected."

— A pamphlet of fifteen pages, adorned with seventeen wood-cuts, is published by Dr. A. Amussat, of Paris, entitled Tied-in Catheters and Whalebone Conductors. On the subject of tied-in catheters little or nothing is said. The author describes and figures, as if new and original with himself, several very familiar applications of the long whalebone bougie, to be used either with catheters open at both ends, or in combination with the tunneled arrangement introduced by Van Buren and Gouley. The procedure called "cathétérisme sur conducteur" was described as far back as 1813, by Desault, and has long been common property. The only original idea here offered to the world is the extension of the "tunnel" to lithotrites, an innovation which we cannot regard as happy. The author has, by some chance, overlooked one of the most useful applications of the whalebone conductor; we allude to the tunneled catheter staff of Gouley, for external urethrotomy. Perhaps if Dr. Amussat can be induced to exert anew his inventive genius for the benefit of his countrymen, he may discover this combination of instruments, which will afford him an opportunity for another elegantly printed and copiously illustrated brochure.

WORCESTER CITY HOSPITAL.

SURGICAL CASES.

[REPORTED BY CHARLES A. PEABODY, M. D.]

Burn. — A child aged seven, four months before admission, was burned by boiling water extensively on the right leg. When admitted there was extensive but superficial ulceration of the inner and anterior surface of the thigh; at the knee the tissues were involved somewhat more deeply, the ulceration nearly girdling the limb at this point, and extending about two inches below the knee; below this the skin was sound; the leg was flexed at an angle of about ninety degrees with the thigh; the ulcerated surface was covered with tender and very sensitive granulations, and there was considerable suppuration.

Under chloroform, an attempt was made at extending the leg; but this could not be completely effected, as by it considerable laceration and hæmorrhage were caused at the flexure of the joint. Extension and counter-extension were then applied, the extending weight consisting of a bottle containing about a quarter of a pound of sand, a small quantity of sand to be added daily. The leg was dressed with a weak solution of chloral. After about two weeks of this treatment, the ulcers on the thigh were healed and the limb almost as

straight as its fellow. After another fortnight the leg was entirely healed and straight. Extension was now taken off, the child got up, and made to walk.

Burn. — A child, eight years old, was burned by boiling water about eighteen months ago, the burn being particularly severe about the right elbow. A year ago she was brought to the hospital for consultation. At that time there was a girdling ulcer extending from about three inches below the elbow to the same distance above it. The tissues were more deeply involved than in the preceding case. Granulations, exuberant, tender, and sensitive, covered the ulcerated surface; the joint was flexed at about a right angle. The condition of things was so unpromising that amputation was advised as the only resort. This was not acceded to by the parents, and she was therefore taken home. She now returns for the purpose of having the arm removed, having been under medical care during nearly the whole of the intervening period. The general condition of the patient is much the same as a year ago, only she looks more delicate. The appearance of the ulcer is unchanged, but there is more distortion of the limb, all the flexors being much contracted. The arm was amputated just above the middle of the humerus. The operation was well borne, and the wound healed rather slowly, but without a bad symptom.

Sarcoma of Jaw. — An Irishman, aged twenty, about four months before admission, received a severe blow on the cheek from a base-ball. This was followed by pain and swelling, which, subsiding, left a small tumor over the antrum resembling the swelling of an abscess. For this he consulted his physician,[1] who extracted a decayed molar. A small quantity of pus followed. In about ten days the patient returned (having in the mean time had another tooth out), no better, but rather worse. The antrum was then punctured; about half a drachm of thin pus followed. A probe being introduced passed freely around in the antrum, encountering certainly no hard growth. A bistoury was passed into the tumor from within the lip, and a little sanious fluid followed. The patient was sent home, with a weak solution of carbolic acid to use as a wash. After about a week's use of this he appeared to be better. He was then lost sight of for about seven weeks, when he again presented himself, the growth having made alarming progress, and now presenting the characteristics of malignant disease. The patient had always been healthy, and at this time his general condition was excellent. There is no family history of cancer, though his father was one of eighteen children, and he himself is one of eleven.

There being no doubt as to the malignant nature of the tumor, its removal was determined upon, the operation being performed by Dr. George A. Bates, as follows: —

The patient was etherized, and an incision made through the cheek from the corner of the mouth to a point about an inch below and behind the outer angle of the eye. The knife at once came upon the tumor, which, issuing from the antrum, had spread up over the maxilla as far as the orbit. This growth was dissected out. The maxilla was found to be much diseased, and was removed wholly, its bony connections being severed with forceps. The wound was closed with hare-lip sutures and the cavity packed with lint.

The next day the patient was very comfortable and free from pain. On the

[1] Dr. F. W. Brigham, of Shrewsbury, who kindly furnished the history of the case prior to admission into the hospital.

fourth day the sutures were removed; union perfect; the cheek was sustained by adhesive straps, the lint removed, and the cavity ordered to be syringed daily with a tepid solution of chloral.

The microscope showed the tumor to be a round-celled sarcoma, of rapid cell-growth and degeneration. The prognosis was, therefore, decidedly unfavorable.

On the twenty-first day the wound had entirely healed, but the swelling of the lower lid, which at the time of the operation was thought to be only œdema, had persisted, and there was now noticed a suspicious appearance of the inner surface of the lower lid near the outer canthus; there was also evidently a new growth at the side of the nose.

A second attempt at extirpating the disease was made, the incision being carried along the lower lid and down the side of the nose, and everything that looked like diseased tissue was carefully dissected out. There was resulting ptosis, but the wound healed rapidly, and the patient was discharged. Soon after going home, however, the disease again showed itself, and advanced with rapid strides to a fatal termination. The patient died about eight months after the receipt of the injury.

Double Inguinal Hernia from External Violence. — A laborer, aged sixty. In a bar-room the patient received a severe kick in the abdomen, from which at once resulted a large double inguinal hernia. Patient states that he never had had a rupture. When brought in he was somewhat feverish; tongue dry; pulse quick, and almost wiry; considerable pain. Was ordered twenty drops of black drop every three hours through the night.

The next morning the patient was quite comfortable; fever gone; tongue and pulse quite natural. He was kept quiet for four days, and then allowed to go home.

LETTER FROM PORTLAND.

Messrs. Editors, — The courts adjourn during the hot season, and the lawyers have a chance to refresh themselves among the hills and on the seashore for the greater part of three months. Every parish makes especial arrangements for the vacation of its ghostly adviser, who once a year slips off his surplice and for six or eight weeks ceases from troubling the wicked. But though people may cheerfully take an annual respite from litigation, and may yearly experience so moral an interval as safely to venture to dispense with the restraints of public religious observances, with a malicious ingenuity they manage to be sick without intermission, and thus keep their doctors at work the year round. The result is a general agreement in our profession that its members get too little recreation. It is almost proverbially hard for a physician with a large practice to cut loose from it as often as once in a twelvemonth. And so, as it was supposed that everybody (that it is to say, everybody who is anybody) either had been or was going to Philadelphia this year, there was a universal anticipation that the meeting of the Maine Medical Association would be but slimly attended, and that there would be a notable lack of the enthusiasm and vigor which has for so long a time characterized its sessions. It was con-

sequently very agreeably surprising to find as full a representation of medical men as usual, and to see no diminution in the amount or deterioration in the quality of the work done. Just how to account for this large attendance is somewhat difficult. Perhaps the hard times are keeping people from the great show; possibly the alarming prevalence of health permitted an unwonted absence from home. At all events, the meeting was very successful in all respects, and that is the main consideration, after all. A few prominent men from different parts of the State, whom one always expects to meet at these gatherings, were missed with regret; and the absence of one — the venerable Dr. Buxton, of Warren, one of the founders of the association — was the occasion of a resolution of sympathy and good wishes.

The meeting opened Tuesday morning, the 27th of June. The inaugural address of the president, Dr. J. M. Bates, of Yarmouth, was referred to a special committee, with instructions to make recommendations for action on its various suggestions. The most important of these related to the preliminary education of medical students. Last year the association passed a resolution declaring it to be the duty of physicians to impress on young men intending to study medicine the necessity of a thorough preliminary training, and to decline to receive under their instruction such as are deficient in education or mental endowments. That was all very well, of course, and put the society properly on record. But the passage of a resolution at an annual meeting is one thing, and strict conformity to the spirit of it by individual members is quite another; and instances are by no means wanting to show that theory and practice have not agreed in this matter.

Still some impression, though often very small, is made on even the most callous by the formal declaration of right principles; and, at the suggestion of the committee, a resolution,[1] which is more emphatic than the previous utterance on the subject, was passed without a dissenting voice.

There can be no question about the advance of professional sentiment hereabouts in this regard. Men who a year ago were timid about insisting on the examination of applicants in our schools, are now outspoken in favor of a searching test of ability.

In the Portland School for Medical Instruction an entrance examination has been held for a year past in every case where the candidate could not show a diploma from a good high-school, or something better, and the teachers have expressed the intention of requiring a knowledge of the elements of Latin and natural philosophy in and after the spring of 1878. When small schools, which are dependent on the fees of their pupils for their running expenses, have courage to adopt this policy, which the great colleges avoid because they consider it suicidal, there really seems to be reason to hope for a general reform in the methods of medical teaching.

The committee appointed by the association to visit the Medical School of Maine reported that ninety-seven students were enrolled, — an exceptionally large number, — and that they were above the average in intelligence and scholarly attainments. Twenty-one were graduated after passing an unusually satisfactory examination. The clinics during the term were large and very

[1] See JOURNAL, July 13th, page 47

interesting. The plan of allowing students who have studied medicine but one year to come up for their final examination in anatomy, physiology, and chemistry, has worked well; but a second year's trial is essential for a full demonstration of its results. In addition to the regular lectures, the students have had the advantage of a short course on public health from the professor of therapeutics.

This last leads me to speak of the efforts of the association to establish a state board of health in Maine. A committee was appointed last year to cooperate with the constituted authorities in the early appointment of such a board. The committee reported at this meeting that Governor Connor, in his inaugural address, recommended favorable action. The judiciary committee of the legislature was convinced of the propriety of the measure, but, not deeming it expedient to act up to its convictions of what was right, preferred to truckle to the popular clamor for retrenchment, and killed the bill. The senseless opposition of the advocates of certain exclusive systems of medical practice was so great that the committee believe it to be better that important sanitary measures be introduced by the representatives of the people for whom the benefits are asked than by the medical profession, which is frequently regarded with an unworthy suspicion, and whose active efforts for the public good are so often misconstrued. The majority of the legislators are indifferent to, or ignorant of, the crying necessity for a public health board. The committee recommend, therefore, that the members of the association make especial efforts to enlighten the representatives from their respective sections, so that through them the people will demand in their own behalf the action which the physicians, with characteristic disinterestedness, have vainly sought for them.

The annual oration was pronounced by Dr. Lewis W. Pendleton, of Belfast, whose subject was Involuntary Action. The abstract of this oration, in a recent number of the JOURNAL,[1] conveyed to your readers an idea of its wisdom, wit, and scholarly finish, and it must suffice to say that, without any disparagement to the profound and brilliant productions with which previous orators have favored the association, this is admitted to have surpassed them all.

Dr. George F. French, of Portland, was elected orator for 1877.

Among the resolutions was one favoring the adoption of the metric system of weights and measures at the earliest practicable time; and another protesting against congressional sanction to the National Surgical Institute.

But little space remains for mention of the strictly medical papers which were presented. A number of them, as you will judge from the subjects chosen, and from the authors[2] whose names appeared in your account of the proceedings, were exceedingly interesting, and some must be regarded as actual contributions to our stock of knowledge. The discussions which were called forth were entertaining and instructive.

The next meeting of the association will be held in this city on the second Tuesday of June, 1877. GAMMA.

[1] JOURNAL, July 13th, page 48.
[2] JOURNAL, July 13th, page 47.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING JULY 29, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	744	36.49
Philadelphia	825,594	464	29.22
Brooklyn	506,223	318	32.66
Chicago	420,000	212	26.25
Boston	360,000	196	28.31
Providence	101,000	53	27.18
Worcester	51,300	24	24.34
Lowell	51,700	41	41.24
Cambridge	50,000	23	23.92
Fall River	47,200	41	45.17
Lawrence	36,000	18	26.00
Lynn	34,000	16	24.47
Springfield	31,400	14	23.18
Salem	26,500	22	43.17

Normal Death-Rate, 17 per 1000.

THE following testimonial has been presented to Dr. Sinclair by physicians of this city as expressive of their feelings toward him at the present time. It shows that whatever misapprehensions and false impressions may have gone abroad in connection with recent events with which his name has been associated, Dr. Sinclair stands without reproach in the opinion of his professional associates: —

BOSTON, *August* 5, 1876.

A. D. SINCLAIR, M. D.

DEAR SIR, — The undersigned, your professional brethren in the city of Boston, desire to express to you their sincere sympathy in view of the trying experiences through which you have recently been compelled to pass. Your conduct in connection with these events has inspired our respect for your manly character, while it has not in any degree impaired our appreciation of your professional skill and integrity. We have carefully studied the published evidence elicited during the singular investigation of the case which you attended, and have failed to discover proof that you neglected any of the ordinary precautions against accident in such circumstances.

We take pleasure in availing ourselves of this unusual opportunity to avow our continued and cordial regard for you.

[Signed] Henry I. Bowditch, C. Ellis, Geo. H. Lyman, H. W. Williams, Wm. Ingalls, Francis Minot, R. M. Hodges, H. J. Bigelow, C. E. Buckingham, David W. Cheever, Benj. E. Cotting, and thirty others.

DR. GEORGE STEDMAN has been appointed coroner for Suffolk County.

BOOKS AND PAMPHLETS RECEIVED. — Analysis of Six Hundred and Seventeen Cases of Skin Disease. By L. Duncan Bulkley, A. M., M. D. Reprinted from the American Practitioner. New York: G. P. Putnam's Sons. 1876.

A Clinical Study on Herpes Zoster. By L. Duncan Bulkley, M. D. Extracted from the American Journal of the Medical Sciences.

Chirurgie Antiseptique. Principes Modes d'Application et Résultats du Pansement de Lister. Par le Dr. Just-Lucas-Championnière. Paris: J. B. Baillière et Fils. 1876.

Lithotomy: Its Successes and its Dangers. By an M. R. C. S. E. Melbourne: F. F. Baillière. 1876.

Doctors Differ. A Lecture delivered at the Melbourne Athenæum. By J. G. Beaney, F. R. C. S.

An Unusual Case of Cancer. By James S. Greene, M. D. Extracted from the American Journal of the Medical Sciences.

THE BOSTON
MEDICAL AND SURGICAL JOURNAL.

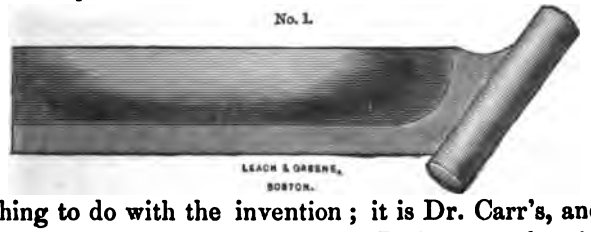
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COLLES'S FRACTURE AND DR. CARR'S SPLINT.

BY HENRY A. MARTIN, M. D.,
Brevet Lieutenant-Colonel and late Surgeon U. S. V.

FRACTURES of the lower inch or two of the radius constitute by far the most frequent of this class of lesions. Even the clavicle is not so frequently reported as fractured, although every case of broken clavicle is known at once, while very many fractures of the lower inch of the radius escape vulgar and even professional detection, and are classed as bad "sprains" merely. It is only when too late for remedy, when swelling has subsided and fragments united, that the characteristic deformity reveals, with certainty, that the case has been one of fracture. I need not state here how numerous have been the forms of apparatus contrived to meet the special exigencies of treatment of these cases. You can find in Hamilton's excellent book over thirty pages devoted to Colles's fracture, and delineations and descriptions of a great many methods for its treatment, including one of Dr. Hamilton's own invention. Within a few months quite a book has been published in London, the principal topic of which is the treatment of Colles's fracture by an improved splint, invented by Professor Gordon, of Queen's College, Ireland. Professor Gordon has won great fame by the splint of which he now offers an improved form, and I think justly, for his splint is, I believe, the only one except Dr. Carr's which recognizes at all a principle of which I consider the splint I am about to describe to be a far more perfect recognition. Dr. Carr is a physician practicing in Goffstown, N. H., whom I have never seen, and with whom my only acquaintance is by report and correspondence. I mention this fact, and also another, that



I have nothing to do with the invention; it is Dr. Carr's, and his only. I cannot suggest an improvement in it. I give two drawings of Dr. Carr's splint. One is a view of the upper surface of a right-arm splint,

the other a profile of its radial side. Its length is eleven and one half inches, its width two inches. It consists of a strip of light wood one

No. 2.



sixth of an inch in thickness, on which is laid a carved wooden "bed" of peculiar form, the irregularly convex surface of which is exactly adapted to the concavity of the lower side of the radius. An oblique cross-piece or "bar," round, four inches long and one inch in diameter, is attached to its distal end. The original peculiarity of the instrument is that its author was the first who has, apparently, reflected that the radius is a much-curved bone, and that treatment of its fractures on a perfectly flat splint can only result in more or less deformity in the bone itself, and in such a change in the relations of its lower articulating surfaces as must, almost inevitably, induce greater or less impairment of the symmetry, usefulness, and comfort of the wrist. In Professor Gordon's splint, the concavity of the radius is recognized as an indication for treatment; but in even the improved form of that apparatus the convex "bed" is applied to the *side* of the bone and not *under* it. For American surgery I must claim that Dr. Carr's splint was invented in 1843, long before that of Professor Gordon. The cross-bar is to support the hand; when the latter grasps, or is firmly bound to it, it will be perceived that the hand is flexed and inclined towards the ulnar side of the arm, and the constantly observed tendency to subluxation of the ulna and very prominent and perceptible deformity resulting therefrom is obviated. There is nothing original in this cross-bar; it is to be found in Bond's very ingenious splint, and in others.

When a patient comes to me with a Colles's fracture, I take the splint proper to the side injured, lay along its upper surface a quadruple fold of old cotton sheeting, a little wider than the whole width of the splint, and extending from the cross-bar to an inch beyond its proximal extremity. The lower surface of the fore-arm is then laid on this, so that the cross-bar comes very exactly under the metacarpo-phalangeal articulations. Two or three turns of bandage may now be thrown around the middle of the fore-arm, binding it firmly to the splint, and the patient requested to grasp the cross-bar as strongly as may be; in this he may require the aid of the surgeon's hand. This action of the hand will reduce at once a very large proportion of all fractures of the lower part of the radius, and its doing so is a sufficient proof of the perfect adaptability of the apparatus for the lesion for which it is designed. Of course, the surgeon can, if he prefers, reduce the fracture *before* applying the splint; some cases require this to be done, and *all* those in which the fracture is complicated with subluxation of the two rows of carpal bones,

which should be looked for sharply, and not placed in the splint till *thoroughly* put in proper position. A properly padded, very light, thin splint strip, say eight or nine inches long and two inches wide, may now be laid along the back of the radial side of the fore-arm from the carpo-metacarpal junction. This dorsal splint is not always absolutely necessary, but may as well be always applied. All that is now requisite is to bandage in the usual way; the bandage may extend upwards from the middle of the metacarpus to the proximal end of the splint, leaving — and this is *very* important — the fingers to be exercised and even used freely, for holding fork, spoon, etc. After the first week the bandage need extend no farther than to the carpo-metacarpal articulations, leaving the patient free and useful motion of the hand. If the bandage, however, is thus limited, the surgeon should see that the carpus is firmly and immovably attached to the splint; this may be well done by winding a strip of good sticking-plaster, an inch and a quarter wide, three times round the wrist and splint. The great value of this mode of treatment is that it relieves the patient of much discomfort and enforced disability, and that, when the fracture is sufficiently consolidated for the splint to be removed, the hand will be ready for use, and entirely free from the stiffness, often amounting almost to anchylosis, so familiar to hospital surgeons and all who have had or seen much of this sort of surgery, — a stiffness rendering the hand more or less useless for weeks, months, and sometimes even years. In fifty cases of "simple fracture near the lower end of the radius, only sixteen are positively known to have left no perceptible deformity or stiffness about the joint." "Twice I have found the wrist and finger joints quite stiff after the lapse of one year; in one case I have found the same condition after two years, in one case after three years, and in two cases after five years." "If we confine our remarks to Colles's fracture, the deformity which has been observed most often, and, indeed, with only rare exceptions, *being found in some degree, more or less, in several of those cases which I have marked as perfect*, consists in a projection of the lower end of the ulna inwards and generally a little forwards."[1] In the part of Dr. Hamilton's excellent work from which these extracts are made may be found a great deal more in regard to the frequent and persistent stiffness, deformity, and lameness consequent upon these fractures. Dr. Hamilton combats the doctrine that the stiffness of the finger-joints is a result of extension of inflammation to those joints, and maintains, what is doubtless true to a certain extent, that it results from an "effusion, first serous and subsequently fibrinous, along the sheaths of the tendons;" "an anchylosis produced, not as has generally been affirmed, by extension of the inflammation to these [the finger] joints, but by the inflammatory effusion and consequent adhesions along the thecæ and serous sheaths."

[1] Hamilton on Fractures and Dislocations, Philadelphia, 1860, page 279. The italics are mine. — H. A. M.

"The fingers are quite as often thus anchylosed as the wrist-joint itself, a circumstance which is wholly inexplicable on the doctrine that the anchylosis is due to an inflammation *in* the joints." Dr. Hamilton[1] says that the same stiffness, etc., is as often to be noted after severe sprains and other severe injuries of the wrist as in fractures, and infers that the more or less perfect adjustment of the fracture has nothing to do with these disagreeable *sequelæ*. I should say that when a fracture is imperfectly reduced, the degree of inflammation at and about the seat of injury must be great and the amount of effusion large. When the fracture is without delay and *perfectly* "set," both would be reduced to a minimum.

With this splint applied, the patient can with ease and safety wear his ordinary coat, and take it off and put it on with little or no assistance. The length of time before the splint may be safely removed must depend a great deal, of course, on the prudence and occupation of the patient.

In the treatment I now advocate there is a most perfect coaptation, and, as I have thoroughly ascertained by very many observations, *no tendency whatever to displacement* so long as the bandaging is kept properly close. In the last case (just discharged) under my care, a laboring man sixty-three years old, I removed the splint on the eighteenth day, found the wrist in perfect "drawing," told him to wear a sling, and come to see me every three days. I saw him at these intervals for two weeks, during which there was not the slightest tendency to distortion. In the first dozen or fifteen cases I treated with this apparatus I saw the patient five or six times in the course of treatment, and almost every time unwound the bandage, keeping the splint carefully in place; in not one instance did I find the slightest tendency to displacement. This was, of course, experimental, to ascertain the capabilities of the method of treatment. I by no means recommend meddling with and frequent examination of fractures, as when I narrated the above experiments I was most unkindly and disingenuously twitted with doing by a famous New York surgical specialist, at the late meeting of the American Medical Association at Philadelphia. In treating Colles's fracture, now, I never take off the bandage nor even partially unwind it, unless to tighten it, from its first application till its final removal, nor would I require to see the patient in the intervening time but for the probability of loosening, or the possibility of slipping of the bandage or splint.

I have already, in six years, treated about forty-five cases, of all degrees of severity and complication, in which the lower two inches of the radius was the seat of fracture. In none of these was deformity to be recognized at the time that the apparatus was removed. I have seen many of these cases years after the injury, and in not one have I been able to detect which side was injured, from any abnormal variation.

[1] Pages 279, 280.

A most absolute proof of the perfect adjustment attained by Carr's method is found in the entire relief to the pain very soon after the arm is "put up." I have given Leach and Greene, instrument makers of this city, approved patterns of Carr's splint, only stipulating, as there is no patent, reserved right, or royalty of any sort to be paid, that they will afford it to the profession at as low a price as may be consistent with a reasonable profit.

I have omitted to recommend the use of Carr's splint in cases of sprain of the wrist. In no other way that I am acquainted with can such perfect rest and consequent immunity from pain be procured for such cases. There is a large class of cases of injury of the wrist, in which fracture of the styloid process of the radius exists, but cannot be made out with absolute certainty; when such cases are treated as sprains merely, the positive fact of fracture is ascertained too late for remedy. It is not always often easy in *any* case of so-called sprain of the wrist to say, positively, that fracture does *not* exist, and even where there is none of the bone there is always contusion, twisting, and partial or complete fracture of interosseous ligaments, injuries requiring rest as much as if the bone were broken.

THE USE OF AROMATIC SULPHURIC ACID IN NECROSIS.

BY EPHRAIM CUTTER, M. D., CAMBRIDGE.

April 10, 1875, Dr. A., of Worcester, requested the writer to remove the necrosed alveolar process of his wife's sister. She was of middle age, pale, thin, weak, anxious, and worn. She had suffered much with her teeth. Her upper right middle and two lateral incisors were found to be loose, and their lower edges hanging below the line of their fellows. There was a fungoid, spongy swelling over the front of the diseased process. When this was pressed, pus freely exuded from several openings, and also from a softish, elastic swelling as large as a hazel-nut, situated at the dome of the hard palate inside the mouth. The loosened teeth could be freely moved in every direction with the thumb and fingers. The roots of the teeth distinctly grated against the sound alveolar process. There was a complete separation of the teeth and the bone. Dr. A. said that he had thought of using the aromatic sulphuric acid, but that the disease was so extensive and the separation so complete that he regarded it as useless to try to save the teeth in any way. It appeared to the consulter, however, while the surgical extirpation would be effective and justifiable, that if free incisions were made into the swollen and spongy gums there would be an evacuation of the contents of the dilated capillaries and abscesses; that a healthy action would be promoted by relieving this unnatural distention, and that the necrosed bone might be slowly removed by the stimu-

lation of the aromatic sulphuric acid topically applied without destroying the teeth. It was thought that then the periosteum would lay down new bone in place of the old, and refasten the teeth in their old place. It was agreed to employ the following: —

℞ Aromatic sulphuric acid . . . . . 3j.
Aquæ . . . . . 3j.

By means of a half-ounce syringe supplied with a small ivory tip, one inch and a half long, and one eighth inch in diameter, the acid solution was injected at first twice a day and afterward once a day. About two drachms were used at each injection. The syringe tip was deeply buried into the soft tissues through one of the openings. Pus would freely exude from the other openings, even from that in the top of the mouth after each injection.

Tonics were administered. A diet of animal food and unbolted wheat was rigidly maintained.

From the outset of this departure a marked improvement in the soft tissues occurred. But the teeth remained loose and dangling, and Dr. A. thought their recovery doubtful. It was re-suggested that it would be an easy thing to remove them at any time if they did not reset, but that the process of replacing old with new bone was of necessity a slow one.

In about forty days the outer incisor became solidly fixed in its old site. Then the next incisor also tightened. The middle incisor tightened slowly. In November following it could be very slightly moved, but its edge was a little below the line of the other teeth. The other two incisors were as stiff as they ever were. A few spiculæ of bone were removed from the front of the alveolar process during the period of the treatment. In the mean time the general health of the patient improved greatly. She gained in weight, color, and strength. At the present time (July, 1876) she is entirely recovered.

We think it is reasonable to connect the result in this case with the means employed, the acid, the tonics, and the food.

Dr. Atkinson, of New York, has reported some remarkable instances of cure of necrosis by this agent used in its full strength, it is said. It hastens the disintegrating and separating processes, and at the same time destroys the germs of parasitic micrographic growths in the dead and dying bone. According to Dr. Atkinson, it does not act unhealthily upon sound tissues whose vital connections are unimpaired. No substances stand higher than the mineral acids as antiseptics and destroyers of bacteria, amœbæ, and vegetations of animal secretions. Were it not for their caustic effects they would long ago have supplanted carbolic acid.

RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.

BY W. L. RICHARDSON, M. D.

OBSTETRICS.

Ligation of the Umbilical Cord. — In a paper recently read before the Société de Biologie of Paris,[1] Dr. Budin gave the results of two series of experiments which he had recently performed. Each series comprised a number of carefully noted observations. In the first set, of thirty-two cases, he waited, before cutting the umbilical cord, until the pulsations had ceased; while in the second set, of thirty cases, he cut the cord immediately after the birth of the child. In both series of cases he preserved all the blood which escaped from the placental end of the cord. He found that about twelve cubic centimetres of blood were lost in those cases in which the ligation of the cord was delayed until after the pulsations had ceased, while nearly one hundred cubic centimetres were lost when the cord was cut while yet pulsating. From these experiments Dr. Budin concludes that the cord should never be cut until all pulsations have ceased, as otherwise the child loses eighty-eight cubic centimetres (3.08 oz.) of blood. The accuracy of these experiments is recognized when it is borne in mind that the fœto-placental circulation is a closed circuit, and that therefore no blood can escape from the placental tissue externally except through the cut end of the umbilical cord. By waiting until the pulsations of the funis have ceased, a large amount of blood is saved to the fœtus which must otherwise be lost. The time during which the cord pulsated after the birth of the child averaged two and a quarter minutes, the longest time being fifteen minutes. By allowing the blood thus to be withdrawn from the placenta, its subsequent expulsion is greatly facilitated, owing to its diminution in size.

Rupture of the Uterus.[2] — Dr. Bandl gives an account of thirty-two cases of labor in which this accident occurred. In no case did he find the pathological change in the uterine substance which has generally been considered as the predisposing cause, especially in multiparæ. The uterus was always thick, well contracted, and the cervix very thin. In nearly every case the fissure was found to be in the cervix, and even in those cases in which the body of the uterus was torn, the rent began in the cervix. The peritoneum was never separated from the fundus. Dr. Bandl believes that the rupture is always due to some disproportion, since he found that, in nineteen out of the thirty-two cases there was a narrow pelvis, in three hydrocephalus, in eight a shoulder presentation, n one a prolapse of the foot with the head, and only one case was ob-

[1] Bull. Gen. de Thérap., February, 1876.

[2] Brit. and For. Med. Chir. Rev., April, 1876, from Centralblatt, No. 33, 1875.

served which could not be explained. Pressure does not produce a rupture, as frequently sloughing occurred without rupture, and in one case both were observed in the same patient, though situated at different points. An unyielding os uteri, rudimentary or double development, and fibroid tumors are often stated as causes, but this is not proved. Bandl agrees with Chiari, Braun, and Späth in considering that the abnormality is due to an excessive thinning of the cervix occurring during labor; he has found by actual measurement that the walls of the uterus in multiparæ, especially when there has been a disproportion in previous labors, were much developed. In normal circumstances the cervix is drawn back over the head of the child by the muscular uterus, the orificium internum remaining, as investigations on the living and dissections on the dead subject show, about the level of the pelvic brim. If there is a disproportion which prevents the presenting part from descending into the pelvis, the cervix is abnormally stretched, the internal orifice is raised a hand's breadth above the brim, and a rupture becomes possible. If this abnormal condition has once existed it takes place more easily in future labors, and thus we find ruptures occurring more commonly among multiparæ. Dr. Bandl believes that a rupture can be recognized as threatening when the internal orifice gradually ascends whilst the cervix stretches and the fundus acquires a lateral position.

The Relation between the Sex of the Fœtus and the Fœtal Pulse.[1] — Dr. Mattei reports the result of a careful study of several hundreds of cases. The examination was made before the labor began, and when the child was undisturbed. He bases his opinion on the rule that if the pulse-rate is below 135, the fœtus is a male; if above 150, it is a female. In only three cases did his prediction turn out to be wrong, and in all of these after he had predicted males the fœtuses were found to be small and feeble females, two of which soon showed symptoms of congenital syphilis. In these three cases, therefore, he considers that the slow pulse-rate was due to the feeble condition of the fœtus.

Separation of the Symphysis Pubis during Labor.[2] — The extent of separation which can take place between the two pubic bones is a subject which has given rise to much discussion among obstetricians. Some writers have gone so far as to maintain that a limited separation takes place in all cases of labor, while others have as positively asserted that no separation is possible, without giving rise to serious results to the mother.

In the obstetrical clinic at Erlangen, a patient thirty years of age was confined with her fourth child. She was a woman of medium size, healthy, and her previous labors had been perfectly normal. Her fourth labor progressed naturally until after the escape of the liquor amnii,

[1] Archives de Tocologie, March, 1876.
[2] Revue de Thérap. 2, 1876.

when it became very tedious. The child presented in the dorso-posterior position of the right shoulder. By bi-manual version this position was changed to the second position of the breech. The os slowly dilated, and as soon as the hand of the attendant could be introduced, version was performed and the child delivered in an asphyxiated condition. A few days later the patient began to complain of pain referred to the symphysis pubis. This pain was aggravated by the slightest movement of the lower extremities. An examination detected a complete separation of the two pubic bones. A belt was applied by means of which the two surfaces of the bones were brought together. At the end of a month the patient was discharged, a firm union having taken place between the bones.

Pregnancy with Unruptured Hymen.[1] — Dr. Gustav Braun gives an account of three cases in which he attended women in their confinement, the hymen at the time being unruptured. As a result of a careful examination of these cases, Professor Braun concludes that an unruptured condition of the hymen is not of itself a positive sign of virginity. The hymen may be so elastic as to allow the penetration of the penis without leaving any trace of its presence in the vagina. Two of the cases afforded conclusive evidence that the deposition of semen within the vulva was all that was required to produce impregnation, since in those cases there had been no penetration within the vagina. One of the cases showed the advantage which a spontaneous opening in the hymen for the escaped of retained menstrual fluid has over an artificial one. An imperforate hymen is no prevention to delivery, the prognosis in these cases being favorable. One of the cases showed how the urethra may take the place of the vagina for the purposes of copulation without any subsequent disturbance of the function of the bladder.

(To be concluded.)

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

The society met at the house of Dr. Curtis, 2 Spruce Street, February 12, 1876, at 7½ P. M. The president, Dr. Hodgdon, in the chair.

Complete Absence of the Menstrual Function. — Dr. Minot said that he had recently been consulted by a single lady, thirty-four years old, in reference to a slight indigestion, and learned that she had never menstruated, nor had she ever had any symptom referable to an attempt at menstruation, such as pain, discomfort, fullness, oppression — in short, any symptom which could be referred either to the presence or the absence of the catamenia. So far as could be judged from external appearances she was a fully developed woman in perfect health.

[1] Wiener Med. Wochen., March 25 and April 1, 1876.

Uterus Subseptus. — Dr. Richardson reported the case. The uterus had two ora, the rest of the uterus and the vagina being normal. The case is published in the Journal, xciv. 349.

Dr. Chadwick expressed a doubt whether this case might not be, after all, that of a double uterus. Küssmaul, he believed, made no mention of so restricted a duplicity as this in his exhaustive treatise.[1] The Italian case cited by Dr. Richardson seemed to be the only exception to the general rule that, in the development of the genito-urinary tract from the fusion of the two Müller's ducts, at whatever point the fusion was arrested, the whole canal above that point remained double. The fact that the canal of what seemed to be a supernumerary cervix opened into the other canal could easily be explained by supposing that, owing to some laceration during labor, a fistula had formed in the septum dividing the two; a second uterine cavity might, on this supposition, exist, although the sound had not been made to enter it.

Dr. Richardson replied that the fusion of Müller's ducts normally begins in the middle. Schroeder alludes to two or three cases which are variance with Küssmaul's statement as quoted by Dr. Chadwick.

Dr. Forster called attention to the possibility of error in diagnosis as having actually occurred shortly before one of the confinements of the patient described by Dr. Richardson. The physician, ignorant of the peculiarity, and finding by digital examination the lateral and unused os without coming upon the other, failed to recognize the stage of labor present.

Incarcerated Pessary. — Dr. Lyman reported the case of a lady who, married ten years, six years ago had her last child, followed, apparently, by some prolapse or retroversion of the uterus. She went abroad, and in Leipzic consulted Crede, who found slight retroversion, and introduced a pessary. There it remained till, recently, five years later, Dr. Lyman removed it. The extraction was difficult, and attended with pain and slight hæmorrhage. The upper half of the pessary had become roughened and eroded, and was completely imbedded in the posterior cul-de-sac. The lower half was sound, but corrugated. The material was thick soft-rubber tubing covering a wire which was bent into the shape of a Hodge's closed pessary. The cervix uteri was deeply ulcerated, and there was considerable leucorrhœa. There had been no interference with the action of the bowels, but the patient had had a constant sense of something to come away, whenever she was in the erect position. Dr. Lyman exhibited a rubber pessary, in the possession of Dr. Chadwick, which is said to have been worn for seven years. It was much eroded and roughened.

Dr. Buckingham stated that he had not introduced a pessary for several years; he had generally found them out of place when long worn. One, which had been worn two or three years, and had caused a good deal of backache and leucorrhœa, he had found tipped up edgewise in the lower part of the vagina.

Dr. Lyman said that though pessaries were often needed and useful they were often introduced without necessity, and that he had taken away more than he had put in.

[1] Von dem Mangel, der Verkümmerung, und Verdopplung des Gebärmutter. Adolph Küssmaul. Würzburg. 1859.

Dr. Chadwick stated that he had also taken out almost as many as he had introduced during the past three years; many of the pessaries removed had given rise to acute inflammation of the uterus or surrounding tissues; all had failed to effect the object for which they were designed; though believing them to be of great service in the treatment of certain conditions, he deprecated their promiscuous use to correct any and every slight displacement of the uterus.

He was reminded by Dr. Richardson's case of another anomalous condition occasionally found in the vagina, namely, the union of the anterior and posterior walls, as a result of acute inflammation, so as either to occlude the canal completely, or, what was more common, to produce partial atresia. He had several times seen the resulting deformity, but had never witnessed the process itself until recently. A widow, fifty years of age, had applied at his dispensary for treatment of a very intense inflammation of the whole vaginal canal with profuse purulent discharge; the disease was unquestionably of gonorrhœal origin, and was of two years' duration. She had ceased to menstruate eight years before. After three or four visits Dr. Chadwick had been one day amazed to find the vagina occluded an inch and a half above the vulva; he was, however, able to dissect the walls apart by his finger, and thus reëstablish the canal in its full integrity. Through the speculum the mucous membrane of the apposed walls could be seen to be denuded in some places and in others covered with shreds of false membrane. This dissection had to be repeated several times, but the woman has since been discharged, well.

Dyspareunia. — Dr. Wellington related the case of a patient whom he had been engaged to attend in labor. She had consulted a physician in the city in reference to intense suffering during the whole sexual act, dating from her marriage, two years before, and was told that there was no apparent reason for her difficulty, which would probably disappear after labor. The labor was severe, and was terminated by forceps. The perinæum was ruptured, was sewed up, and healed well. A day or two ago she was very well, but the pain of intercourse was as bad as ever. The finger in the vagina gave no pain, and the parts appeared to be perfectly normal. Dr. Wellington asked for the experience of other members of the society in this matter.

Dr. Lyman gave the case of a young married lady, perfectly well formed, with large hips, who suffered intense pain — vaginismus — during sexual intercourse. On examination it was found that the hymen and never been fully ruptured. A fenestrated, hard-rubber tube was introduced with some pain, and the patient was instructed to repeat the application. There was only temporary relief from this means. A second examination disclosed an herpetic patch inside the inner labia, which was the source of the trouble. The vaginal orifice was powerfully stretched with the two fingers, the herpetic patch was cauterized with the nitrate of silver, and a pledget of lint wet with lead-water was kept applied to the cauterized region. The parts healed entirely, the symptom disappeared, and the patient will be confined in a few months.

Dr. Minot remarked that such cases are by no means rare. He had seen several. One was like that reported by Dr. Wellington. The patient was delivered of a blighted fœtus, but no relief followed. She was then etherized,

and the sphincter vaginæ was ruptured. She afterwards had a child at full term, but the hyperæsthesia continued exactly as before. In New York she underwent some operation at the hands of a gynæcologist without material benefit then or since. Another case was that of a woman sixty years of age who had suffered during the whole of her married life from vaginismus. There is every variety of the disease and every degree of suffering. Some patients have simply no pleasure in the sexual act; others experience disgust, and so on to the extremest suffering. Many of the cases may be regarded as neuroses, in the absence of other assignable cause, and occur in women of marked nervous temperament. This was the case with the patient first mentioned.

Dr. Buckingham briefly referred to some of the more obvious causes of the malady, such as the disproportion in size or length of the relative organs, and not infrequently the occurrence of painful vascular tumors at the orifice of the urethra.

Dr. Chadwick mentioned as among the causes the occurrence of hypertrophied papillæ in the vaginal entrance. He stated that he had seen but one case where the pain could not be referred to this cause, while, on the other hand, these growths are not always tender. They are best seen by separating well the thighs, and are found standing up like rows and groups of needles, one sixteenth to one eighth of an inch in height, in the groove between the urethra and the clitoris, on either side of the labia minora and at the posterior commissure. They may be snipped off and the bases cauterized with nitric acid, but they are extremely difficult to cure. In one or two cases of painful intercourse he had found an injected, eroded spot at the base of the hymen.

Dr. Forster stated that he had had a case in which he found mucous patches. These cured, there was no further trouble.

Dr. Abbot said that he thought, with Dr. Minot, that many of these cases are neuroses. He had found the condition to be not always uniform, but varying considerably with the nervous state of the individual, sometimes depending upon a disproportion of desire, or an excess of it, on the part of the husband, or a too romantic and sentimental idea of marriage on the part of the wife, as in a case cited in illustration.

Dr. Minot stated, in answer to a question, that he had seen but one case in which painful intercourse did not begin from the first.

Dr. Abbot mentioned the case of a woman whom he attended in her first confinement, after being married six years. He saw her at the beginning of labor, when the tenderness of the vagina was so exquisite that he was obliged to etherize her in order to make an examination. The tenderness had existed during the whole of her married life.

Blighted Ovum. — Dr. Buckingham showed the specimen, which occurred in the practice of Dr. J. W. Cushing. It was a case of twin pregnancy and single labor, the blighted fœtus coming away with the placenta after the birth of a healthy child at term. The case will be fully described hereafter.

A Rare Form of Menstrual Blood. — Dr. Lyman showed the specimen. The patient is a woman fifty years old, single, and never having had connection. She menstruates monthly, and loses each time a large amount of blood. Once in two or three months she throws off from two to four ounces of semi-

solid material, which when fresh and infiltrated with fluid might upon superficial examination be mistaken for hydatids, but which on standing is seen as soft, brown, fringed flakes of blood. It has been examined, and pronounced to be simply blood. The case will be reported more fully after further observation, the patient being seen to-day for the first time.

Caustics. — Dr. Lyman inquired of the gentlemen present their experience in the use of an alcoholic solution of bromine upon the cervix uteri, and what advantage it possesses over glacial acetic acid or any other caustic. He preferred and had used for the past twenty-five years the acid nitrate of mercury in all cases requiring anything more than superficial action. He had never seen salivation result, but he had always used it with caution, never smearing it over the whole cervix, and carefully limiting its action with the application of chalk.

Dr. Richardson stated that, at Dublin, he had twice seen patients badly salivated by the application of the acid nitrate of mercury to a greater or less extent over the whole cervix.

Multiple Spontaneous Abortions. — Dr. Chadwick reported the case. The patient is a woman twenty-eight years old, who has miscarried at from two and a half to three months — never exceeding that time — ten times in the past five years. She applied to be relieved of the habit, and stated that she had never done anything to induce abortion. The accompanying pain and hæmorrhage had been slight. A little trickling of blood would be the first indication, and in a week or ten days the ovum would come away. Upon examination the vagina was found to be small, and the uterus, though of nearly normal length, exceedingly flabby and difficult to define. Otherwise, nothing abnormal was discovered. Neither the woman nor her husband had had syphilis, and the latter was moderate in his sexual appetite. More recently the patient presented herself when six weeks pregnant. The body of the uterus was found to be unusually soft, even for the impregnated condition. She was advised to take to her bed at two and a half months and remain there perfectly quiet, at the same time abstaining from all sexual intercourse. These directions were implicitly followed, but at the end of the third month the trickling of blood began, and she aborted as before. The ovum was subjected to very careful examination, but it appeared to be perfectly healthy. The patient recovered well, but on reëxamination the same condition of the uterus was found. The walls of the cervix were very thin. Dr. Chadwick stated that he was now trying the effect of Simpson's galvanic stem, which had been difficult of insertion on account of the flabbiness of the uterus, but was borne by the patient without the slightest sensation.

Dr. Buckingham suggested the use of ergot in large doses, say drachm doses, several times in a day, until the pulse should be brought down below sixty in the minute. The object of this would be to get the alterative effect upon the uterus.

LECTURES ON FEVER.[1]

We have received from Henry C. Lea, of Philadelphia, a volume of some two hundred and fifty-odd pages, entitled Lectures on Fever, by William Stokes, M. D., D. C. L. Oxon., F. R. S., and edited by John William Moore, M. D., Assistant Physician to the Cork Street Fever Hospital, etc.

This book is one of the most valuable contributions to the literature of clinical medicine which has appeared for some time. It is always a matter for congratulation when men of large experience find time to publish the records of their observations; and this is especially the case with regard to Dr. Stokes, whose well-known powers of accurate observation and reasoning make all his communications worthy of our most careful attention. The volume under notice contains a series of thirty-three lectures on fever, delivered in the theatre of the Meath Hospital and County of Dublin Infirmary. Their delivery was spread over a considerable period of time, and were not given in any regular sequence so as to form a continued or systematic course. Most of them were delivered at irregular intervals, and all as extemporary discourses. Some of the lectures were delivered as far back as the year 1854, and appeared in the *Medical Times and Gazette* under the head of Clinical Lectures on Fever.

The most interesting lectures in the series are the twelfth to seventeenth, inclusive, on Secondary Pneumonic Complications, The Heart in Fever, and the twenty-sixth, twenty-seventh, and twenty-eighth, on Treatment and the Use of Stimulants in Fever; and finally, Lecture XXIII., on the complication not infrequently met with, phlegmasia alba dolens.

In the earlier lectures Dr. Stokes has considered in some measure the question of the separate identity of typhus and typhoid fevers. He has preferred, and we think wisely, to dwell on the great subject of the relation of the secondary affections of fever to the essential malady, and in the light of that relation to discuss the question of treatment.

In Lectures XII. and XIII., the author very ably discusses the subject of secondary pneumonic complications of fever. In speaking of the term typhoid-pneumonia, he says: "You will be convinced when your experience has been enlarged, that under this term many different forms of disease have been classed, and it is very doubtful whether a true pneumonia is ever developed in the course of a fever. You will meet with the physical signs which attend pneumonia; but these, as you all must know, are insufficient to establish the existence of the disease, and even these very physical signs are seldom so well marked, so complete, as it were, as in simple inflammation of the lung. Nor again do they follow in the regular succession which we find in true pneumonia." A little farther on he says: "Here let me warn you against a common error with respect to cases of disease of the lung arising in the

[1] *Lectures on Fever.* Delivered in the Theatre of the Meath Hospital and County of Dublin Infirmary. By William Stokes, M. D., D. C. L. Oxon., F. R. S., Regius Professor of Physic in the University of Dublin; Physician to the Queen in Ireland. Edited by John William Moore, M. D., F. K. Q. C. P., Assistant Physician to the Cork Street Fever Hospital, etc. Philadelphia: Henry C. Lea. 1876.

course of some form of constitutional malady or fever. They are usually set down as pneumonia, — typhoid-pneumonia by some. Now, the name itself would be of little moment if its adoption did not lead to errors in practice; and although it cannot be affirmed with certainty that in none of these cases is there pneumonia, yet we have good grounds for believing that in many of them inflammation, as the term is commonly understood, is either absent from the first, or, if it occurs, that it is only secondary to a special lesion induced by some form of essential disease. It is difficult to give any well-defined classification of the various forms of diseases described under the head of typhoid-pneumonia, or to draw the line between simple asthenic inflammation of the lungs and those conditions described from an early period under the terms of bilious, putrid, or typhoid-pneumonia. And observe that when I make use of the term asthenic-pneumonia, I refer more to the condition of the general system than to the activity or inactivity of the local disease. For so far as local inflammatory action is concerned, there is proof that it may originate and proceed with rapidity, and even with vehemence, in the very last periods of life so that the disease may be sthenic quoad the local condition, and yet the case be itself asthenic in reference to the general state of the economy. Much of the confusion with regard to this subject has arisen from the circumstance that too great weight was attached to the presence of certain physical signs which were taken as always indicating similar vital conditions."

In Lecture XIV., entitled The Heart in Fever, there is considerable interesting matter. "Long ago," says Dr. Stokes, "Laennec stated that in certain cases of low fever he found the heart in a softened condition, in what he termed l'état poisseux of the muscles of that organ. He suggested that in those cases which exhibit rapidity of pulse during convalescence this symptom is to be attributed to a softening of the heart. Dr. Stokes does not consider this opinion well founded; he thinks that the true typhus softening of the heart, so far from being followed by rapidity of the convalescence, has much more frequently the effect of making it slow. Slow not only as considered with reference to the condition of health, but actually falling below the ordinary standard. That rapidity of pulse is commonly associated with typhus affections of the heart, in which there is weakening of the organs while the fever continues, must be admitted. But this is a different proposition from that advanced by Laennec, who speaks of the symptoms during convalescence."

A little farther on Dr. Stokes, in speaking of the significance of rapid pulse, says: "You may rest assured that rapidity of pulse in convalescence, so far from indicating any remains of the typhus disease in the muscular structure of the heart, is in most cases a proof of the existence of some lurking disease of some important organ or organs. The local diseases which most frequently attend this condition are of two kinds: one of them tuberculosis of the lungs and other parts; the other is the existence of a secondary reactive inflammation in the mucous glands of the intestine."

Dr. Stokes gives special warning in regard to the complication "Phlegmasia alba dolens," which may occur without any distinct notice of the invasion of the disease.

In Lecture XV., he states that he considers exemption of the heart from

typhus affection a ground for a favorable prognosis, while continued excitement of the heart is equally a ground for a bad prognosis. In speaking of cases of continued excitement of the heart, he says: "This condition of the heart, whether it has existed all through, whether it is intercurrent or ephemeral, or, as we say, terminal, coming on at the close of the case, or lasting many days, is, I need not tell you, of the worst augury."

In Lecture XVI., he speaks of depression of the heart being more marked in typhus than in typhoid, of the impulse of the heart, and closes with the following remarks: "I have mentioned that the sounds of the heart become altered in the course of a fever: the change begins in the left ventricle, and travels towards the right side of the heart; the systolic sound first becomes diminished towards the left, and afterward towards the right. In cases of recovery the phenomena follow the inverse course, as we might naturally expect. We find the returning first sound audible, first over the right and then over the left ventricle.

Lecture XVII. The diagnosis of actual softening, as distinguished from simple debility, will depend on the character of the fever and the time during which the physical signs of failure of the heart have been present. Experience again shows that the progressive diminution of the impulse and sounds of the heart, which may proceed to their extinction, is sufficiently often connected with the actual softening to justify the diagnosis of this lesion.

And again, referring to prognosis, he says: "It is clearly to be more favorable in the case of depression than in that of excitement of the heart; and in looking at the frequency of softening, we arrive at the conclusion, which seems a strange one, that the existence of such a change in one of the most important organs of the body may lead to a better prognosis than under opposite circumstances. The reason of this is obvious. In the case of typhus softening we can safely and advantageously employ stimulants which are comparatively ineffective, and often inadmissible when the heart is excited."

The lectures on treatment are less interesting than the others, with the exception of that portion where the subject of stimulants and feeding is discussed. The precise indications for the administration of stimulants will bring joy to the heart of the young and inexperienced practitioner.

Dr. Stokes criticises Dr. Todd in a kindly manner, in regard to stimulants, and agrees with Graves, from whose ninth lecture he quotes in regard to feeding. It was Dr. Stokes to whom Graves made the well-known remark, "Will you, when the time comes, write my epitaph, and let it be, 'He fed fevers.'" After quoting from Graves, he says: "I have now shown you that Dr. Graves was no advocate for the indiscriminate and too liberal employment of food in fever, and that he was fully alive to the dangers both of the want and the excess of food, even in convalescence."

Having previously spoken of anticipative stimulation on page 198, he says: "Take this rule with you into practice, that in the treatment of fever and at almost any period of fever, you are not to be guided by the pulse alone. It must be observed in relation to the action of the heart, remembering that a full and good pulse may coincide with a feebly-acting heart, a heart under the influence of the fever-poison, often, as it were, on its way to the state of softening. All this, you see, bears on the question of the anticipative treatment."

Among the most reliable indications for the early use of this treatment are the physical signs of weakness of the heart, and the following are the physical signs which seem to indicate the anticipative use of stimulants:—

(1.) Early subsidence of the first sound, observed over the left ventricle.

(2.) Diminution of the first sound over the right ventricle.

(3.) The heart acting with a single and that the second sound.

(4.) Both sounds being audible, but their relative intensity being changed, so as to represent the action of the heart of a fœtus in utero.

(5.) With these signs a progressive diminution of impulse, which occasionally becomes imperceptible, even when the patient lies on the left side.

The full administration of stimulants is generally called for when the patient has passed the age of eighteen or twenty. Their energetic use is indicated principally in adults between the age of twenty-five and forty-five; and here we employ them at an early period, not so much to combat existing prostration, but to anticipate the depression of vital power, which sooner or later is almost certain to ensue.

As to quantity to be given of wine, whisky, or brandy, he says: "There are no certain rules; every case has its own peculiarities, even in the same epidemic. You will have differences in the necessity for stimulation, differences in the degree of vital prostration, in local complication, and in all the physical signs of the heart, as to their nature, combination, mode of subsidence, and behavior under treatment."

Lecture XXX. is on the local treatment of secondary affections in fever. The treatment is rather old-fashioned, and the lecture is remarkable as being the least interesting in the whole series.

In Lectures XXXI. and XXXII., the subject of treatment is continued, and one is surprised to find that the hydropathic treatment revived by Brand is not spoken of.

The lectures close with a very interesting one on phlegmasia alba dolens. An interesting case of the complication in question is appended, and as the patient was a physician, and former pupil of Drs. Graves and Stokes, the facts are given in his own words.

In conclusion, we would say of the book that it is written in excellent English, and is characterized by a clearness, comprehensiveness, and modesty, which render it a model of style and method. The publisher has given us clear type, but poor paper. However, we presume the cheap paper lessens the cost of publication, and so places a valuable work within the reach of many who would not otherwise see it. J. P. O.

STATE SOCIETY TRANSACTIONS.

The activity of many of our state societies is made manifest in the annual reports which are now appearing in rapid succession. It is encouraging to notice that the interest in the work of these organizations is becoming more general, and our medical public is beginning to appreciate the great advantages to be derived from developing home resources pertaining to the science and practice of medicine.

We have before us the communications of the Rhode Island Medical Society, which contain a number of original communications in addition to the society reports. The Transactions of the Medical and Chirurgical Faculty of Maryland at its seventy-eight annual session contains a great deal that is interesting. The annual address was delivered by Dr. Roberts Bartholow, of Ohio, on The Degree of Certainty in Therapeutics. The bulk of the society work for the year is put in the form of reports from the various departments of medicine, special reference being very properly made to all native improvements. The proceedings of the Connecticut Medical Society are peculiarly interesting, partly on account of the attractive form in which they appear and partly from the plan which has been adopted by the society to obtain a more general participation on the part of the various counties in the State. This plan, which has lately been inaugurated in Massachusetts, is on its second year's trial in Connecticut. The work was placed in charge of a committee, which issued a circular containing a series of questions relating chiefly to croup and diphtheria. The members of the society were thus enabled to act in unison, and the result is an extensive report embodying a very large experience in the treatment of the diseases in question, in that State. We agree with the committee in thinking that, " with some modifications, which experience can suggest, it will be the most effectual means of any yet proposed of cultivating in the profession in the State a habit of communicating important and valuable information for the general good." The report is illustrated by several handsome plates; there are also one or two quite able original contributions.

The Medical Society of the County of Kings has adopted a novel method in publishing in Brooklyn, New York, a monthly report of their proceedings. It constitutes in fact a monthly medical journal. We see here no reason for refraining from giving some of the innumerable New York journals the benefit of this work, which would thus be more widely disseminated. Indeed, it is to be regretted that the vast amount of work which is annually produced by these state societies should not find a place in our medical journals. The proceedings would appear more promptly, and would obtain a much wider circulation. The system upon which nearly all of our medical journals are conducted is chiefly responsible for this waste of energies. Until this system has been practically revolutionized we cannot expect to obtain a literature which will reflect properly the work of our countrymen and will be read by more than a very limited portion of our professional brethren. Were we fortunate in possessing a few able journals, representing the larger sections of the country but enjoying a national circulation, we venture to assert that American physicians would be startled at the amount and value of the work done in this country, which to a great extent is annually buried beneath the leaves of purely local periodicals.

MEDICAL NOTES.

— The following remarks concerning the health of Rome and Naples, taken from the *Medical Times and Gazette*, will doubtless be read by those of our readers who take an interest in the sanitary arrangements of large cities. The healthiness of Rome is a subject which has been somewhat ventilated in this country lately, and which appears to be now very properly attracting the attention of the medical profession there. The Medical Academy of Rome held an important meeting on the 30th ult., to vindicate the health of the city. Drs. Lanzi and Terrigi read papers on the results of minute analyses of air and other sanitary conditions in the central and suburban quarters, and maintained that Rome, during spring and winter, ranks with the healthiest of Italian cities, and is not only innocuous but beneficial to invalids. The centre of the city remains healthy in summer and autumn, but the suburban quarters, exposed to the Campagna, are then undoubtedly insalubrious. The climate of Rome is gradually improving as the vineyards are built over and drainage extends. Considerable discussion followed the reading of these papers. Dr. Pantaleoni urged that, even in summer, excavating and drainage works did not, as in virgin soils, produce malaria. Dr. Balestra condemned the loose classification of fevers in the weekly health returns. These, if correctly read, would show that the mean mortality did not exceed twenty-four per one thousand. Dr. Ratti exposed the many fallacies in the health returns; *inter alia*, the numerous relapsing cases which appeared as fresh ones when re-admitted to hospital. The debate is to be resumed on the next meeting of the academy. Regarding the sanitary condition of Naples, a correspondent writing from thence on the 23d ult., states, "There is a lamentable insufficiency of good water, the sewerage is as bad as it can be, and the habits of the *bassa classé* are indescribably foul. Still, after all these admissions, travelers have in too many cases to blame themselves for maladies which have been produced by a total disregard of the very different conditions of climate on which they have entered, and the different mode of life imposed upon them. Were proper attention paid to these points there would be no panic about a residence in either Rome or Naples. There is a vast deal to be done to render the sanitary conditions of Naples what they ought to be, and it is satisfactory to state that a deputation of the inhabitants will leave this city to-morrow for Rome, to discuss with the minister of the interior the ways and means of introducing the necessary reforms; but there is surely no little injustice on the part of travelers in holding Southern Italy responsible for what are only the results, in many instances, of their ignorance of the climate, of their extreme imprudence, and violation of the most elementary laws of health."

— In a clinical lecture on cancer of the rectum in the *London Medical Examiner*, Dr. John Marshall remarks: "You may have non-cancerous ulcers of the rectum, which are either strumous, or tuberculous, or dysenteric, or syphilitic, or simple ulcers, from mere want of attention to the condition of the bowels, from neglected piles, or again, in women, from the pressure of an enlarged and displaced uterus upon the bowels. When any of these ulcers are superficial, you can hardly confound them with cancer; but when you meet with a distinct excavation, having somewhat elevated borders, the question will arise

Is this a cancerous ulcer, or is it not? A common ulcer of the rectum is usually situated on the posterior aspect of the bowel, and a syphilitic ulcer quite at the margin of the anus; whilst cancer is usually found higher up, and on any side of the gut. But these distinctions are not absolute. In a doubtful case, from the history and the absence of the true signs of cancer, you may give a provisional opinion, and express a hope that it is a case of non-malignant ulcer, which may be healed. But you cannot be certain; it may be but the beginning of cancer, the symptoms of which may, sooner or later, become evident.

An ulcer of the rectum which is healed, after division of its base and edges with a knife, by cauterization of its surface and edges, by attention to the condition of the bowels and to any special defect in the general health, cannot be cancer; but, on the other hand, if an ulcer goes on from bad to worse, the edges getting thicker and more nodular, and the base more excavated, you are obliged to confess that it is probably, or positively, of a cancerous nature. It is certain, however, that common ulcers of the rectum are not always distinguishable from the earlier conditions of cancer, but they ought always to be distinguished from the later forms of that disease. In the earlier condition you may be sometimes puzzled, and then I advise you to give only a provisional opinion, to treat the case as one of non-malignant ulcer, and to improve the health by giving tonics or the requisite special remedies; let the patient rest, keep the bowels open by injections, and quiet by morphia suppositories, and divide the ulcer, or treat the edges with caustic. Endeavor to get the ulcer to heal, and in many cases you will succeed."

— Dr. A. B. Judson, in a paper read before the New York Academy of Medicine, attempts to explain the cause of rotation in lateral curvation of the spine. The distinguishing feature of the explanation of rotation here proposed is, the recognition of the fact, heretofore overlooked, so far as the author is aware, that the posterior portion of the vertebral column, being a part of the dorsal parietes of the chest and abdomen, is confined in the median plane of the trunk, while the anterior portion of the column, projecting into the thoracic and abdominal cavities, and devoid of lateral attachments, is at liberty to, and physiologically does, move to the right and left of the median plane. Photographs of an ingenious contrivance, by which the spinous processes are held still by horizontal threads while the bodies are unhindered in their movements, show how readily rotation takes place when a slight lateral curve is given to the spine.

— Dr. Dickson, an English navy surgeon at Constantinople, has replied to the insinuations made by the English and French journals and newspapers that the report of the medical commission on the death of the late Sultan was not justified by the facts. From his account it appears evident that the Sultan had been suffering from mania, with paroxysms of fury, and that he undoubtedly died by his own hand.

— The *New York Medical Register* for the ensuing year (Dr. A. E. M. Purdy, editor) is published. It contains the names of 3805 physicians, divided as follows: in New York city and county, 1190; Brooklyn and Kings County, 380; the remainder of New York State, alphabetically arranged, 1267; in New Jersey, 589; and in Connecticut, 379.

BOSTON CITY HOSPITAL.

MEDICAL CASES OF DR. R. T. EDES.

Ovarian Tumor; Repeated Paracenteses; Spontaneous Perforation of Cyst; General Peritonitis; Death. — J. DeL., aged twenty-two, entered the hospital several times at intervals of a few months, for the purpose of obtaining, by paracentesis, relief from her abdominal swelling.

The swelling began about three and a half years ago with some pain in the right iliac region, and extended all over the abdomen. After the first tapping, at which twenty-eight pints of clear syrupy fluid were withdrawn, it refilled in five months, and again, after repeated tappings, at intervals of five, three, three, two and a half, two months, and one month. After some of these tappings a tumor could be felt in the right iliac region, but it is stated that none was felt per vaginam. The fluid, during the latter part of the time, was thick and dirty, sometimes with distinct masses of pus. The patient usually left the hospital in a day or two and returned to her usual avocations, although there was sometimes sufficient pain to require a dose or two of morphia.

On June 28th she was brought to the hospital in a state of collapse, with restlessness, vomiting of coffee-like fluid, and imperceptible pulse.

It was ascertained that since she was discharged, on May 26th, she had been doing housework as usual, when, on the day before she returned to the hospital, she was suddenly seized with abdominal pain and vomiting. She died in a few hours after reëntering.

The autopsy disclosed general peritonitis. On the right side of the median line lay the greater part of a compound ovarian cystic tumor, the largest cyst being adherent to the abdominal walls at the median line, as well as slightly to the omentum. Its walls were from a sixteenth to an eighth of an inch in thickness, roughened on the inside, and contained a somewhat gelatinous fluid, with much pus. At the upper part, and somewhat to the left, was a small perforation, perhaps one eighth of an inch in diameter, which corresponded to a reddened, rough, and ulcerated patch upon the inside. It was about four inches above and to the left of the place where the trocar usually entered the cyst. The other cysts were much smaller and filled with clear gelatinous material.

It is not known whether ovariotomy had ever been proposed to this patient before the last time at which she left the hospital, relieved. It is doubtful if she would have acceded, as the relief from tapping was so complete and her general health was unaffected.

Fibroid of Posterior Lip of Cervix Uteri forming a large Sloughing Vaginal Tumor; Removal by Enucleation; Recovery.[1] — A. J., a German woman aged fifty, married, but not living with her husband for some years, had had severe metrorrhagias in 1875, but considered her health good until four weeks before entrance, when her abdomen began to swell, and she had pain in her back and hypogastrium. Her urine began to dribble away, and she had no appetite. Her urine was very abundant, having been drawn by catheter the

[1] Reported to the Boston Society for Medical Improvement, May 22, 1876.

day before she entered, and seventy ounces being taken in the same way the day after. It was of specific gravity 1008 to 1010, and contained a trace of albumen, but no sugar. Her appearance was exceedingly anæmic, and a considerable degree of fever was present.

The first examination, on May 15th, disclosed the presence in the vagina of a large, hard, sloughing tumor, with an exceedingly offensive discharge. It was apparently posterior to the os uteri, which was represented by a ragged orifice into which the finger could be passed. The sound passed to about the normal distance. The tumor was somewhat smaller above than below, but had no distinct pedicle, and was considered to be a fibroid connected with the posterior lip of the cervix.

On the next day, when preparations were made for the removal of the tumor, a second examination, under ether, with the assistance of Dr. G. H. Lyman and Dr. O. W. Doe, showed the essential correctness of the previous diagnosis, the uterus itself appearing as a mere appendage of the tumor situated upon its upper and anterior portion, and occupying nearly its normal place. The bladder and rectum were also in their natural positions.

A copper wire was placed around the tumor so as to clear the os, and also a sort of flap posterior to the chief mass, thought to be possibly a portion of the normal tissue of the uterus, a supposition which soon turned out to be incorrect. A considerable portion of the hard mass was left above the line of the wire. Upon tightening the wire by the écraseur it soon broke, and this accident was repeated with both the single wire and a wire rope. While we were awaiting an iron wire, which had been sent for, the tumor, which had been dragged down to the vulvar orifice, was incised by a knife, and the usual white structure of a fibroid disclosed. It was then found that it could be separated into lobes and layers by the fingers and knife, without cutting. This process gave us first a large flap from the anterior surface, which had been partly cut off by the wire. Another portion was then dragged out of the vulva, the fingers constantly separating it from its attachments either to the uterus or to the rest of the tumor, but as the patient's pulse began to flag a little, it was cut off by the knife, without any hæmorrhage, with the intention of allowing the patient to come out of the ether and of finishing the removal at another time.

Under the inspiration of Dr. Lyman's enthusiasm, however, aided by his vigorous traction upon the remaining portion, a still larger mass was rapidly enucleated in the same way, the patient having in the mean time received several hypodermic injections of brandy. Several smaller fragments were easily separated, when it was found that nothing but a sort of ragged bunch of comparatively insignificant size remained at the upper part of the vagina. In fact, so closely was it removed and so much did some portions resemble the normal structure of the uterus that it was for a moment feared that a portion of that organ had been removed sufficient to make an opening into the peritoneum. It proved, however, to be hardly disturbed from its normal place. The various portions must have made a tumor equal in size at least to two small fists. They were not immediately weighed, and having been preserved in an aqueous solution of chloral their present weight, one pound five and three quarters ounces, is perhaps a slight exaggeration.

The patient rallied well from the ether. Antiseptic injections of carbolic acid and of chloral were freely used, and quinia administered for a short time, but as it seemed disagreeable to her, and especially as there were never any signs of inflammatory or septicæmic action, it was soon omitted.

On May 21st, three days after the removal of the tumor, a vaginal examination showed a bunch of fragments at the upper part of the vagina resembling swollen piles, among which a sound could be passed into the uterus. A portion of one was cut off with scissors, and the stump touched with strong carbolic acid.

On June 5th the os was found large, soft, not abraded, although bleeding easily when touched. The sound passed less than three inches. The condition of the patient improved until she was discharged, on July 5th, still somewhat anæmic, but otherwise well. The urine continued copious, but there was no longer any trouble in passing it.

The following table shows the range of temperature for a few days.

May.	Morning.		Evening.
16th	100½°		102½°
17th	99¾°		103½°
18th	101¼°	Removal of tumor.	104½°
19th	100¼°		101½°
20th	100¼°		100¼°
21st	99½°	Vaginal examination.	101 °
22d	99½°		100¾°
23d	99¾°		100½°
24th	99 °		100½°
25th	97¾°		98¾°
26th	99½°		101½°
27th	98½°		98½°
28th	98°		99½°

From this point the temperature remained a little above normal, on two occasions reaching 101°. On June 15th it was about normal.

LETTER FROM BERLIN.

Messrs. Editors, — The death of Louis Traube had not lost its first impression when the medical department of the Berlin University was again summoned to the observance of similar ceremonies by the death of Professor Ehrenberg, at the ripe age of eighty-one years. What the former was to experimental clinical medicine, the latter was to scientific medicine. Both were investigators, and deduced laws under which details arrayed themselves in natural subordination and proof. The two were as dissimilar in their recognition at court, the former having been a martyr to his religious tenets, the latter a pronounced favorite. Ehrenberg turned all this to honorable account in his scientific investigations; Traube was for twenty-four years a clinical leader *without a title*, and shortly before his death rejoiced not only in his personal appointment as professor by the Imperial Minister of Ecclesiastical Education, but also that United Germany chose in him a fit opportunity to illustrate her religious policy.

Christian Gottfried Ehrenberg was born in Delitzsch, April 19, 1795. At the age of twenty years he went to Leipsic to study theology. The inclination of his youth, however, was to medical studies, and he remained but half a year in Leipsic as a theological student. In 1817 he came to Berlin, and matriculated in the young university. To physiological chemistry he devoted most of his time; in 1818, while yet a student, he made a contribution to the systematic study of fungous growths. His inaugural dissertation was an effort in the same direction, its topic being Sylvæ Micologicæ Berolinenses. It displayed independent and bold thought, and added to the physiological knowledge of these Berlin growths; it gave its author the reputation of critic of the idea, then existing, of the transformation of inorganic substances into organic. The dissertation, as is here the custom when the case merits it, was used as authority, and was for sale at the book-stalls under the name and protection of the university.

A more extensive report of his investigations into the development of fungus and mold he communicated in the transactions of the Leopold Academy of Naturalists of Bonn, in 1820. In this same year, under the auspices of the Academy of Natural Sciences, Berlin, he made a scientific tour with Dr. Hempsich, a distinguished naturalist of Berlin. During an absence of six years the Libyan Desert, Middle Egypt, Syria, and Arabia were visited; the report of these researches was published under the title, Natural History Travels through North Africa and West Asia in the Years 1820–1825. Soon after his return he was made extraordinary professor in the Medical Faculty of the University of Berlin. In 1829 he was selected by von Humboldt to accompany him on his researches in Siberia, more particularly in the Ural Mountains. The expedition was fitted out with a leader in nearly every department of natural science, and furnished with money without stint. The Russian emperor prepared relays of horses, halting places, and every possible convenience, so long as the expedition was in his domain. The results of the two years' investigations were published together, those of Ehrenberg appearing side by side with those of the then renowned Humboldt.

Continuing investigation in the department of animal physiology, he published between 1828 and 1834, under the name of Symbolæ Physicæ, contributions to the anatomy and physiology of the lower animals. These were known respectively as Symbolæ Physicæ Mammalium, Avium, Insectorum, and Animalium Evertebratorum. In 1835 he published an article on Phosphorescence, interesting from a scientific stand-point, together with a review of the chronological development of this remarkable phenomenon, which he attributed to infusoria. Three years later, Infusoria as Perfect Organisms, a Glance at the Deeper Life of Organic Nature, was published by him. This work was not only rich in new materials, but contained a systematic review of all that was heretofore known of infusoria and radiata. Though devoted to a specialty from the character of the investigation, it was so comprehensive in its range as to win the consideration and position of a text-book. In 1839 he was promoted to an ordinary professorship. This year found him elected foreign member of several scientific societies, of which the Royal Society of England paid him the most distinguished honor. Among other distinctions given

him at this time of his life was his election, in 1842, as one of the thirty knights of the order of the Friedens Klasse, accompanied by the decoration *pour la mérite* for science and art. One of his last contributions to scientific literature was the voluminous work on mineralogical formations by microscopic organisms under the title of Micro-Geology.

The decadence of Ehrenberg's life was marked by a series of personal griefs, the chief of which were the death of his wife and the gradual loss of sight by cataract. He lived but a few weeks after the successful removal of the cataract, and died in the infirmity of old age. His burial was imposing in the style of its celebration, and honored by the character of the personages in attendance. Nothing, perhaps, can lend to the popular eye more *stateliness of the state* in a government whose head has royal blood than, on the occasion of the death of a citizen eminent at once as a scholar and as a court favorite, to honor the sad solemnity by its manifest recognition. The funeral cortege was headed by the "gala-equipage" of the emperor, and passed through a thickly-settled portion of the town out to the Marienkirchhof, near the Prenzlauer Thor. Among the nearest mourners were the elder professors of the medical, natural science, and natural history faculties. To a republican and non-royalist it may not be an unfair question to consider, which will outlive the other; whether the scientific achievements of the scholar, in the thinking, critical mind of his natural audience, or the imposing influence of royal recognition at burial, upon the public eye. The reader must put himself in Prussia, certainly out of America, else the suggestion is devoid of meaning.

With such allusion to his death and burial, it is proper to introduce the residence of Ehrenberg. It is a two-story house in Franzoesische Strasse, on which is an inscription in the classical German of that day, indicating that it was devoted by Friedrich Wilhelm the Second, to the Society of Natural Philosophy, which was founded in 1773, and was the oldest scientific body in Berlin. In the prime of life of its late possessor, it was the repository of his private collections from the natural history of Egypt, Siberia, and Arabia. Not only the personal attractions of Ehrenberg, but the public interest of its contents, gave the house a peculiar charm. MED.

BERLIN, PRUSSIA, *July* 15, 1876.

LETTER FROM DR. DALTON.

MESSRS. EDITORS, — My attention has been called to a paragraph in the *Boston Herald* of August 3d, purporting to be a report of the testimony of Dr. J. B. Treadwell at the inquest in the case of Clara T. Fisher, as follows: —

"Dr. Treadwell was recalled, and testified that Prof. John C. Dalton, of New York, examined the uterus and the right ovary of the late Clara T. Fisher, in Dr. Treadwell's office, August 1st. He said there was unmistakable evidence of pregnancy, which had existed about two months."

The statement, as quoted above, might give the impression that I had been able to say, from my own independent inspection of the uterus and ovary, that pregnancy had existed in this case, and that I fixed its date with some precision. This impression, however, would not be entirely correct. The ovary,

when I examined it, contained a corpus luteum, well developed and of normal structure, showing a colorless central clot and a convoluted wall of a rather dull yellow. It is well known that two of the most important elements in fixing the true character of a corpus luteum, apart from its volume and structure, are the colors of its central clot and of its convoluted wall. But at the time of my examination the specimens were nine days old, and had been kept in a preservative fluid, which might have altered the color of either or both its parts. Dr. Treadwell informed me that at the time of the autopsy the central clot was also perfectly colorless, and that the convoluted wall was of a bright chrome yellow. I have no reason to doubt that his observations were correctly made, and consequently that this was a true corpus luteum of pregnancy; but I was necessarily guided, in forming this opinion, by his report of the condition of the parts when fresh. I stated my opinion unreservedly to Dr. Treadwell, without calling his attention, in so many words, to the specific grounds upon which it was based; judging, from his evident familiarity with the subject, that he appreciated fully the importance and bearing of my previous questions and his replies. This does not imply any censure upon Dr. Treadwell for the manner in which his testimony was rendered at the inquest; but since my opinion has been quoted as evidence, I think it proper to say exactly how it was formed.

With regard to the uterus, I could not form a distinct judgment from the appearances visible at that time. The inner surface of the organ, at the points where the sections had been made, was softened and ragged. Dr. Treadwell, I understand, had previously found fragments of the chorion entangled with it. The presence of these bodies would of course render the fact of pregnancy absolutely certain. I did not find them at the time of my examination. But this is no evidence that they had not existed when the organ was fresh, as they might readily have been detached by subsequent manipulation and the contact of the preservative fluid. Yours very respectfully, J. C. Dalton.

Boston, *August* 10, 1876.

LETTER FROM DR. TREADWELL.

Messrs. Editors, — Prof. J. C. Dalton has kindly shown me a communication which he intends to publish in your Journal. I wish to say that at the request of Dr. A. D. Sinclair I gladly submitted the organs in question to Professor Dalton for examination. After this examination had been made, the coroner, having become aware of the fact through a letter written to him by Dr. Sinclair, recalled me before his jury and asked me to state whether or not Professor Dalton had examined the organs in question, and, if he had, to state what he said as to the evidence of the preëxistence of pregnancy. I replied that Professor Dalton had examined the right ovary and portions of the uterus, and expressed himself as confident that the woman had been pregnant.

At the time of his examination Professor Dalton made the general statement that he had no doubt the woman had been pregnant, and that he drew his conclusions from the appearance of the corpus luteum; and, as he says in his letter, did *not* specify the particular points which enabled him to form his

opinion; these I had no means of knowing, — inference not being knowledge, — and consequently in what I said before the jury I was obliged to confine myself to what I saw Dr. Dalton do, and his bare statement that in his opinion pregnancy had existed.

In alluding to the question of pregnancy in the Fisher case the following language is used in your editorial of last week: "The fact that they" — the jury — "were willing to receive evidence bearing on a question," etc. The phrase "were willing to receive" would seem to imply that evidence upon the point in question was volunteered by some one, and if by anybody it must have been by me. Such was not the case, for having undertaken to make the post-mortem examination, I was bound by fealty to the commonwealth, the medical profession, and my own conscience to make it a thorough one; and having made it, I was bound by my oath as a witness to tell all that I found, which I did in my written report without giving any opinions. It would have been manifestly absurd and criminal for me to have withheld, as it has been claimed I should have done, that portion of it relating to the organs of generation. This is all wrong. If I found the uterus in an abnormal condition I was just as much bound to tell of it as I was to say that the heart was unsound, if such were the case. Had I withheld a portion of my testimony from the jury, on the ground that in my opinion it did not have any bearing on the death of the woman, I should by so doing have constituted myself jury as well as pathologist and witness.

The question of relevancy was one for the jury, and the jury could not determine the relevancy or irrelevancy of the point in question until they had heard the evidence. To contend that they could have done so would be equivalent to saying that they could have given a fair and truthful verdict without any investigation.

The knowledge of the fact of pregnancy is sometimes of the greatest importance to the officers of the law, in conducting a criminal case, and the surgeon who makes the post-mortem examination cannot tell what the course and termination of the case may be, nor what may be required of him as a witness in connection with it. One case should be the same to him as another, and in every case he is bound to get all the information he can from the autopsy. Of course as a witness he is bound like all other witnesses to tell the truth in regard to whatever he may be inquired of, no matter whether it appears to him pertinent or not. As to what is pertinent the tribunal before which he testifies must decide, and not he nor the public.

The JOURNAL represents me as saying that the wall of the corpus luteum was "congested;" "corrugated" was the word I used. The appearances represented by these two words would give diametrically opposite indications in regard to the real character of the corpus luteum.

In regard to the doubt expressed as to whether in every case of pregnancy a true corpus luteum is formed, I must say that among all of the cases which I have seen reported as confirmatory of this doubt, I have not been able to find one in which there is proof that pregnancy had existed for the length of time ordinarily sufficient to produce the characteristic appearances of the true corpus luteum, in which there is not something and sufficient to show that wrong conclusions have been drawn from it.

The clause "in the present state of knowledge" (1844), in the paragraph quoted from Wharton Jones, is quite significant as to how much weight should be given to his opinion now.

It *is* quite true "that even prior to 1850" the question was raised as to whether the corpus luteum of pregnancy could be distinguished from that of menstruation; but it is still more true, it seems to me, that nearly all the doubt that has obtained in regard to this point existed previous to that time.

It seems a little strange, in view of what we know at the present time in respect to the appearance of these bodies, to quote a statement made in 1842, that all corpora lutea "have the same form and the same structure."

The *opinions* of authors who wrote previous to 1847, or thereabouts, are to be regarded as of little weight at the present time, from the fact that until the results of the researches of Bischoff, Coste, and Dalton — I name these authors in chronological order — had been made public, no real scientific knowledge had been attained, upon which any opinions could be based. Coste was rather in advance of Dalton in point of time, but Dalton worked out his conclusions in ignorance of the results of the investigations of Coste, and they agree substantially in their conclusions. Nearly all of our present knowledge of the subject is the result of their investigations, together with that of Bischoff, and not only have their conclusions never been refuted, but subsequent observation has, I think I may safely say, confirmed them.

One great source of fallacy in the conclusions of authors who wrote prior to 1847–50 arises from the fact that they were not aware of, or did not give sufficient weight to, the fact that during the first three or four weeks of pregnancy there is no appreciable difference between the corpus luteum of pregnancy and that of simple menstruation.

Bischoff is quoted as disputing the diagnostic value of the so-called *true* corpus luteum in 1843. About 1853 or 1854, I think; although I have not been able to obtain a copy of the periodical in which the article was originally published, he wrote as follows: "The corpus luteum of conception, on the other hand, goes on developing itself throughout the first months of pregnancy, and attains a fullness of size, color, and texture which the menstrual corpora lutea never reach. It lasts throughout the whole period of pregnancy, and disappears after delivery."

Writers upon this subject may be divided into two classes: those that have investigated the matter thoroughly and *worked* out their own conclusions, and those who have simply formed their opinions from the writings and opinions of others. I think it is a fact that those of the first class named, almost without exception, hold to the diagnostic value of the corpus luteum.

Want of space forbids my even giving a list of the host of authors who hold the opinion that the so-called true corpus luteum is really and unmistakably an indication of pregnancy.

In regard to the case reported by Dr. Benham I have only a word to say, and that is this: given, a uterus with its interior lined with such a decidua as Dr. Benham describes, and an enlarged ovum covered with a shaggy coat, which, judging from the detailed description given of it, could be nothing but the shaggy coat of the chorion, there is no doubt in my mind that concep-

tion had taken place, and that the corpus luteum in question was one of pregnancy. The seeming discrepancy between the age of the ovum and that of the corpus luteum may be readily accounted for by either of two hypotheses. Against the evidence afforded by these appearances, the bare statement that the conditions surrounding the woman were such that she could not have had "sexual connection with any one *for at least several years before*," supplemented by the assertion "*that externally the organs of generation presented in a marked degree all of the highly characteristic signs of virginity.*" (Italics are mine.) I know of no more "highly characteristic sign of virginity" than a perfect and extensive hymen, and yet women have come to childbed with that sign of virginity in all of its perfection. That Dr. Benham is inclined to be hasty in his conclusions will, I think, appear from the fact that he says he thinks "that this individual case goes a long way to make it probable" that the ovum is extruded from the ovary more frequently at the beginning of menstruation than at any other time; while on the opposite page he gives a case in which menstruation had been going on three or four days and no ovum had at that time been discharged, although one Graafian vesicle seemed about ready to burst.

In conclusion, I wish to say that the question of pregnancy in the Fisher case was not settled in my mind by the evidence derived from the corpus luteum alone, but that this evidence was regarded as simply corroborative of other appearances which in themselves gave conclusive proof of the fact.

Very respectfully yours, J. B. TREADWELL.

BOSTON, *August* 12, 1876.

[In the editorial referred to, no allusion was made to Dr. Treadwell's evidence beyond his testimony in regard to the significance of the corpus luteum. — EDS.]

MEDICAL DEPARTMENT OF THE UNIVERSITY OF THE CITY OF NEW YORK.

IN relation to the remarks made by our correspondent in the JOURNAL of July 20th, in regard to the university, we understand officially that —

(1.) Professor Budd will continue to hold his clinics in that institution as usual. Dr. Gouley takes Dr. Mason's place in the university division of Bellevue Hospital, and gives clinics on his specialty, so that the number of clinics will be greater than has ever been given by professors in the university during any previous winter session.

(2.) As regards the financial condition of the university, information can only be obtained through the council, but the medical faculty are not aware that any financial embarrassment exists in any of the departments.

(3.) Neither the council nor the governing faculty have ever made promises or had any implied understanding in regard to positions, with gentlemen holding subordinate places in the medical department of the university.

(4.) The changes which the faculty of the medical department of the university recently made had for their object the improvement of the teaching in the college.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING AUGUST 5, 1876.

	Estimated Population.	Total Mortality for the Week.	Annual Death-Rate per 1000 during Week.
New York	1,060,000	609	29.88
Philadelphia	825,594	415	26.14
Brooklyn	506,223	255	26.19
Chicago	420,000	266	32.93
Boston	360,000	191	27.59
Providence	101,000	38	19.62
Worcester	51,300	26	26.35
Lowell	51,700	33	33.19
Cambridge	50,000	21	21.84
Fall River	47,200	36	39.66
Lawrence	36,000	18	18.72
Lynn	34,000	22	33.64
Springfield	31,400	14	23.18
Salem	26,500	19	37.28

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — I cannot forbear saying a few words in regard to the following case, which was reported in your issue of the 27th ult. : —

"Protracted Jaundice, with Severe Constitutional Symptoms, successfully Treated by Choleate of Soda." The case was confessedly one of malarial origin. "Twelve years ago had intermittent fever." "For the past four or five months has had chills and fever at intervals of two or three weeks." "May 29th. Had a chill of two hours' duration, followed by a fever of three hours." "May 31st. Severe chill this morning." "June 2d. Chill three hours, followed by fever." Thus markedly *tertian* in character. "June 2d. Pil. quiniæ sulph. gr. x. to night." "June 3d. Pil. quiniæ sulph. every night, gr. iv." "June 4th. No chill, but a slight amount of fever, this morning."

Thus, after the use of heroic doses of quinia the chills cease and convalescence is established. "June 4th. No chill. Pil. sodæ choleat. gr. vi. every night." After a month of experimenting this agent was first employed, and "its use in this case was in some sense empirical, being based upon its known power as a solvent of gall-stones."

The history as given shows a want of care in making the diagnosis; this was followed by an empirical treatment, and at the end credit was withheld from an invaluable agent with already established reputation as almost a specific in such cases, and credit and prominence given to one scarcely known to the profession. Yours respectfully, H. R. R.

DIED. — At Brighton, 31st ult., Dr. Isaac G. Braman, aged sixty-three.

MILITARY APPOINTMENTS IN THE MEDICAL STAFF, M. V. M. — July 26, 1876, Fifth Regiment of Infantry, Surgeon Edward J. Forster, of Boston, to date from May 19, 1871. Assistant Surgeon Horace E. Marion, of Boston, to date from April 13, 1875.

Eighth Regiment of Infantry, Surgeon Preston M. Chase, of Danvers, to date from January 13, 1875. Assistant Surgeon Charles A. Carlton, of Salem, to date from March 5, 1875.

August 10th, 1876, Fourth Battalion of Infantry, Surgeon J. L. Hildreth, of Cambridge, to date from March 29, 1875. The foregoing are re-appointments to former positions.

August 7, 1876, First Battalion of Artillery, Surgeon David Dana, of Lawrence. Dr. Dana was surgeon of the late Second Battalion of Artillery.

August 12, 1876, Sixth Regiment of Infantry, Surgeon George E. Pinkham, of Lowell. Before the reorganization of the militia Dr. Pinkham was the assistant surgeon of the regiment.

CORONER APPOINTED. — Joshua B. Treadwell, M. D.

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MONSTROSITY: FŒTUS IN FŒTU.

BY C. M. STOCKWELL, M. D., PORT HURON, MICHIGAN.

On the afternoon of the 7th of November, 1854, I was called to see Mrs. J. H., who had been suffering the pangs of maternity about four hours. She had previously borne six children, and in but one or at most two instances had the time of labor exceeded that which had elapsed in the present effort. The pains were markedly inefficient and distressing; both on this account and by reason of her unusually increased size, coupled with the fact that quickening had never been very decided and the fœtal movements always very feeble, she was exceedingly anxious. About two hours subsequent to my arrival, and when for a little time the paroxysms of pain had been less marked, I was suddenly startled by a violent scream from the patient, and a great gush of water, which latter an immediate examination proved to be the result of ruptured membranes. The outcry seemed not so much induced by increased pain as from shock consequent upon the sudden and excessively abundant discharge of liquor amnii.

Pushing my investigations with the purpose of determining the position of the child, I found protruding from the os a ragged mass of so little consistency as to lead to the supposition that it was a partially detached placenta, but the absence of hæmorrhage soon convinced me that such was not the case. To satisfy myself at this time concerning it was simply impossible, with the light of my reading or experience.

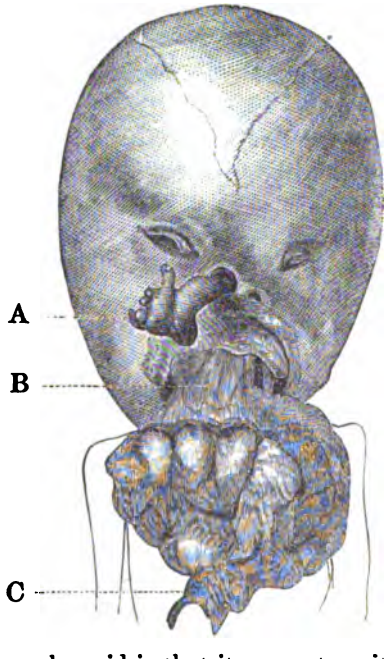
Fortunately the pains forthwith became more characteristic of true labor, though still ineffectual in promoting progress, and as nothing but the anomalous mass presenting and the difficulty in defining the position of the child afforded special cause of anxiety or pretext for interference, it was thought best to await natural developments.

The patient seemed very feeble, and so excessively nervous that convulsions were at times seriously apprehended. Whisky punch and quinine were freely administered, with the result of allaying nervous symptoms and of inducing labor pains more decided in character. Examinations were still very unsatisfactory, as I could find nothing by which to identify the presentation. Thus obscurely the labor proceeded

for nearly eight hours longer, when at length the ragged presenting mass, consisting of an apology for a head, — formed of partially developed centres of the different cranial bones, connected by frail membrane and covered by loose and thin integument that had been enormously distended by contained fluid, which had by rupture of this membrane and integument been discharged during the progress of labor, — and of the fleshy mass hanging from the mouth of this monster, was ejected.

However, but a few moments elapsed ere the delivery was completed and the cord ligated. Examination now revealed the fact that I had encountered (a contradiction of terms) cephalic presentation without a head. The secundines were duly expelled, and the patient proceeded to a favorable recovery except in one respect. This seemed to be the last expiring generative effort, as no other conception occurred, although the lady was then not more than thirty-five and her husband less than forty years of age.

The weight of this monster was nearly seven pounds. On close examination it will be seen to consist (or it did before it had been shrunken in efforts for its preservation) of the well-developed body of an anencephalous child, containing partially within its mouth, nose, and fauces imperfectly developed portions of a twin fœtus, of which the member most perfect in development is the foot, which projects from the right nostril, while a ragged mass, a part of which is covered with healthily developed integument, presents the distinct form of a well-rounded shoulder. The contiguity to the foot suggests the possibility of its being part of the nates, but the form is so exactly that of the point of a shoulder that by no stretch of imagination could it be assigned any other place in the attempted organism. Of the remainder, all that can be said is that it presents neither form nor comeliness.



APPENDIX.

[At the request of the editors, Dr. Stockwell sent the specimen to Boston, and has presented it to the Warren Museum of the Harvard Medical School. On the occasion of a visit by Dr. Stockwell to Boston in May last, the specimen was further examined in his presence, and

with his assistance and advice, by Dr. Thomas Dwight. The following additional points were made out.

The skull had been packed with oakum at the time of birth. On the removal of the oakum a shriveled mass of tissue, apparently the remains of the brain and membranes, was found attached to the base of the cranium. Most of the cranial nerves were identified, and considering the length of time that had elapsed since the birth, and the want of care from which the specimen had occasionally suffered, it seems probable that the brain may have been normal. The misshapen foot, A, projecting from the nostril, is accurately represented in the drawing by Dr. Quincy. Even the toe-nails are quite distinct. The mouth is long and the lips thin. The pedicle, B, of the mass projecting from the mouth is connected with the foot, as is clearly shown by traction on one or the other. It is probably attached to the top of the pharynx, but this could not be determined certainly without too much injury to the specimen. A probe introduced into the right nostril by the side of the foot may be brought out through the mouth at the right of the pedicle, or it may be carried into the interior of the latter. A probe passed into the other nostril comes out to the left of the tumor. The hard palate, consequently, can be but slightly developed. A prominence, C, was found on the lower part of the protruding mass, from which projected a thumb and two fingers. The thumb and one finger were bent; the other was straight, and measured one quarter of an inch in length. There was bone in both the hand and the foot, but not in the remainder of the mass. This was incised on its posterior aspect, and, at about a quarter of an inch from the surface, a large sac with distinctly fibrous walls was encountered. It appeared to be lined with a serous membrane, which presented several valvular folds partially subdividing the cavity. A probe passed readily into a long, narrow passage leading from this space through the pedicle into the right nostril. — EDITORS.]

THREE RARE CASES OF UTERINE SURGERY OCCURRING IN THE PRACTICE OF DR. FREUND, OF BRESLAU.

REPORTED BY SAMUEL HOWE, M. D.

THE three following cases, which have recently occurred here in the practice of Dr. Freund, seem to present so many points of interest that I have taken an early opportunity to send the notes of them for the benefit of the readers of the JOURNAL.

CASE I. *Ovarian Cyst; Ligature of Pedicle; Cure.* — Mrs. Volkmann, from Liednitz, in Silesia, fifty-six years old, first menstruated at fifteen years of age. Then a menostasis of a year followed, after which the catamenia were regular. At twenty-three she married. The

patient has had thirteen children and one miscarriage. Last child was born twelve years ago. The miscarriage came after the seventh child. All the labors before the miscarriage were normal. After the miscarriage, for the first time the patient noticed a swelling in the right iliac fossa. The following six labors were abnormal, and in each case turning and extraction were resorted to. Four years ago the patient had small-pox. After this the tumor grew very rapidly, accompanied by pain in the right side, dysuria, and constipation. The patient, after her first confinement, had a large umbilical hernia. At the time she first saw Dr. Freund, in 1872, she complained of long continued and painful menstruation. On examination she appeared weak and anæmic. The abdomen was as large as at full term of pregnancy, and uneven. This unevenness was due, first, to the umbilical hernia, which was as large as a man's fist; second, to numerous small protuberances, which were especially noticeable in the right iliac region; third, to a tumor just above the symphysis pubis, which proved to be the uterus. On palpation and vaginal examination a multilocular cyst of the right ovary was diagnosticated, which filled the cavity of the pelvis and most of the abdomen. The uterus was pulled upwards and forwards, so that the neck of the bladder was compressed. On examination with the sound the cavity of the uterus was found considerably increased in size; on withdrawing the sound two or three teaspoonfuls of reddish-brown fluid escaped, which proved to be retained menstrual blood. Rectal examination gave the following: cavity of pelvis filled with tumor; tumor adherent, especially on the right side. A connecting band from the right corner of the uterus to the tumor was very noticeable. The band was tense and well defined, and its upper edge was concave. The large cyst of the tumor was then tapped with a trocar, in order to make the diagnosis more certain. The fluid was clearly ovarian. After the tapping and emptying of the cyst the adhesions and position of the abdominal organs could be very clearly made out. The patient was much relieved by the operation, and returned home.

During the following four years it was necessary, as is almost always the case, to puncture the tumor often, the time between each tapping becoming shorter and shorter. The general condition of the patient grew worse, and demanded radical treatment more and more. But ovariotomy in this case was out of the question, since, according to the opinions of most ovariotomists, in those cases in which there are firm adhesions in the cavity of the pelvis the operation is almost always attended with fatal results. Atlee alone, in his book, gives a more favorable, but still not a good prognosis. The spontaneous cure of ovarian tumors has been described by several pathological anatomists, and their cases suggested to Dr. Freund the manner of operating in this instance. A brief description of the pathological changes which take place

in the so-called spontaneous cure may not be out of place here. This process consists in some change either in the tumor itself or in the pedicle. The last, only, interests us in regard to this case. The changes in the pedicle are due either to inflammation or to its twisting, by the changes in the position of the tumor, so that the supply of blood which goes to it is cut off. The last may take place slowly or rapidly. The effect of these changes in the pedicle, if rapid, is destruction of the cyst, either from bleeding into the cavity of the tumor or from gangrene, both, of course, attended with fatal result. But if this twisting takes place slowly, the supply of blood to the tumor being gradually cut off, the change in the tumor may go on so slowly that a shrinking and fatty degeneration or calcification of the cyst follows, and the patient recovers. The great danger in interfering with the amount of blood which goes to the tumor is of course from gangrene, the tumor being thus deprived of nourishment; and it is only in those cases in which there is a secondary supply of blood through adhesion that such an operation should be thought of. It is fortunate that these are the very cases in which a more active interference, that is, ovariotomy, is out of the question, as in this instance. The intention of the operator in this case was to tie the principal nourishing artery of the pedicle with one suture, without dividing the pedicle. Three weeks before the operation was performed the tumor was tapped, the fluid withdrawn being bloody. The patient, after tapping, was very faint for half an hour. At the time of the operation the sac had again filled the abdomen, and was tense and fluctuating. The operation, under chloroform and according to Lister's antiseptic method, was performed by Dr. Freund, assisted by Doctors Martini, Kolaczek, M. B. Freund (brother of the operator), his clinical assistant, Dr. Kurner, and the writer of this letter.

An incision three inches long, to the right and below the lower border of the umbilical hernia, was made directly over the pedicle of the tumor. After making certain that that which was felt was the pedicle, a second smaller incision, from the upper end of the first, and at right angles to it, was made along the pedicle. A large curved needle, carrying a thick carbolized suture, was passed through the Fallopian tube and the upper part of the broad ligament near the uterus, and tied as tightly as possible. The ligature took in about two thirds of the pedicle, including the artery of the pedicle, which ran along the anterior part. A second ligature, about an inch from the first, was passed round the ligamentum ovarii and tied. Both ligatures were then cut short. A drainage tube was introduced in the lower end of the wound, and the edges brought together with silver sutures. The wound was then dressed with charpie and carbolic oil.

The wound healed well, the only drawback being a small abscess in the skin about one of the needle holes. In ten days the patient was

out of bed. Her condition was very much improved, the abdomen daily growing smaller. The distance from one anterior superior spinous process of the ilium to the other, over the swollen abdomen, at the time of the operation was forty-three centimetres; fourteen days after, forty centimetres; and twenty-two days after, thirty-four centimetres. The upper border of the tumor at the time of the operation was above the upper edge of the umbilical hernia, that is, midway between the umbilicus and the ensiform cartilage; twenty-two days after, it was only three fingers' breadth above the symphysis. The line of the incision in the skin was at the time of operation oblique, running from right to left, and just below the umbilical hernia. Now it runs from left to right, and is just over the inguinal canal. The hard portions of the tumor, which at the time of the operation were in the right iliac fossa, are smaller and deeper in the pelvic cavity, and more movable, owing to the lax condition of the abdominal walls. The greater part of the tumor, which was felt behind the uterus in Douglas's cul-de-sac, was firmer, irregular in form, and smaller, so that the uterus was no longer pressed against the anterior abdominal wall, but lay more in the middle of the pelvic cavity. The general condition of the patient was very much improved. About two weeks after the operation she menstruated. Of course, in such a case as this it is impossible to say whether or not the tumor will again begin to grow when the collateral circulation becomes stronger, but as at the time of the operation the patient was in so poor a general condition that something decided in the way of treatment was demanded, and since that she has experienced such relief, it would seem that, as a way of alleviating if not of curing, this manner of operating would often be found of benefit. Time, of course, will alone show how beneficial it is.

Case II. *Case of Double Ovariotomy.* — Mrs. M., thirty-six years of age; menstruation regular and profuse, with a tendency to diarrhœa. Was first seen by Dr. Freund in October, 1874. In October, 1873, her second child was born. Her first labor was ended with forceps. The second was normal. Since the last birth she has noticed that her abdomen was larger than normal, and on this account she sought medical advice. On examination the abdomen was found as large as at the sixth month of pregnancy; her general condition was bad. She complained of cough and diarrhœa. The tumor, which was felt through the abdominal wall, on careful examination was made out to be a multilocular cyst of the left ovary. As the tumor was small at this time, no operation was advised. In October, 1875, after a year's treatment with tonics and nourishing diet, the patient's general condition was very much improved, and the tumor was found to have become smaller. The right ovary could be clearly made out through the vagina to be of normal size. The uterus was anteverted and dextroverted. The pedicle of the ova-

rian tumor could be felt, on examination, above and to the left of the uterus. In May, 1876, the tumor had considerably increased in size; the general condition of the patient was bad. She suffered considerably from dyspepsia, dyspnœa, and pain. The uterus was found to be still anteverted, although the cavity of the pelvis was free from the tumor. The right ovary could no longer be felt. May 1st, the largest cyst of the tumor was tapped, the fluid being clearly ovarian. May 6th the operation was performed, Lister's antiseptic method being used. The administration of chloroform was discontinued after the abdominal cavity was opened, as the patient became asphyxiated. The left ovarian cyst was of the size of a man's head, and multilocular. There were some slight adhesions to the anterior abdominal wall, which were separated, however, without difficulty. The cysts were emptied with the ordinary Spencer Wells ovarian trocar, and the sac was pulled out of the abdominal cavity while a clamp was applied and the sac cut away. The right ovary was found also to be enlarged to about the size of a large Spanish chestnut. The growth was due to general cystoid degeneration, and only at the hilus of the ovary was a small band of healthy ovarian tissue found. A clamp was applied and the ovary removed. Both pedicles were then cauterized with a hot iron. The pedicle of the left ovarian tumor was placed in the lower angle of the wound and the edges of the wound brought together with one suture, and above this the pedicle of the second right ovary, and about this three silver sutures. The wound was dressed with Lister's antiseptic dressing. During the operation the right ovary, tube, and broad ligament were found to be very much swollen, red, and congested, with large dilated veins. Rapid recovery followed the operation. The two clamps came away, one on the seventh, the other on the ninth day. On the fourth day after the operation the patient menstruated, with the ordinary symptoms of pain in the back and diarrhœa. On the ninth day, on account of a slight attack of indigestion, there was a marked rise in the temperature, accompanied by fever; this, however, soon passed off.

After this the patient did remarkably well, and was soon out of bed. The treatment, as regards diet, etc., after ovariotomy, which Dr. Freund uses, consists in giving the patient for the first few days as little nourishment as possible, a little very thin soup being all which he allows. No alcohol, and as little opium as possible, is ordered.

The interesting points of this case are, according to Dr. Freund's opinion, these: 1st. That the tumor should, under general treatment, have grown smaller for a time and then increased in size. 2d. That the right ovary, which in October, 1875, could be plainly made out as of normal size, should in one year's time have increased to the size of a large Spanish chestnut. 3d. That the process of menstruation was at hand at the time of the operation, and on this account was the right tube

congested and swollen; the left was not so. The emptying of the cyst a few days before the operation Dr. Freund thinks of importance for the following reasons: the wound in the abdomen is thus rendered smaller; the circulation and respiration are not so suddenly changed at the time of operation, and therefore there is less tendency to shock and faintness. The last seven cases of ovariotomy which he has performed were done in this manner, and all have been successful, the patient going through the recovery without any fever whatever.

Case III. *Double Uterus, with Hydrometra and Sarcoma of one Horn.* — Patient sixty years of age, married, sterile. Complained of pain in the abdomen which resembled labor pains. For thirteen years she had not menstruated. Three months before, the patient noticed a swelling in the lower part of the abdomen. Her condition at the time the examination was made was very bad. She was weak and anæmic, and on examination a pear-shaped tumor, very sensitive to pressure, could be felt through the abdominal wall, just above the symphysis. The tumor was about the size of a uterus at five months' pregnancy. Vaginal examination gave the following: Vagina in upper part was funnel-shaped. On the right side a crescent-shaped opening could be felt, bound on the outside by a membrane; each lip on the inside by a tumor which proved to be the lower part of the pear-shaped body felt through the abdominal walls. A sound could be passed through this opening three centimetres to the right of the tumor. The condition and form of the os uteri, the shape of the tumor, the symptoms of the disease, pain like labor pains, with great tenderness on pressure, showed that it was probably a case of double uterus, with occlusion and accumulation in one half, — hydrometra, — as the patient suffered extremely from dysuria and pain in defæcation.

Dr. Freund thought that an operation was advisable. The tumor was accordingly tapped through the vagina with a fine aspirator-needle, and the fluid drawn off with an aspirator. The amount thus obtained was about a quart, and was thin, stained with blood, and on microscopic examination was found to contain spindle-shaped sarcomatous cells, pus, changed red-blood corpuscles, and a large amount of mucus. From this the diagnosis of sarcoma of the left half of the uterus, with hydrometra, was decided upon. Three days after the operation the patient died, previous to her death suffering from vomiting, pain in abdomen, and tympanites. The autopsy showed that the cause of death was ileus. The uterus, which was adherent to the omentum, after the fluid was drawn off sank into the pelvic cavity, thereby pulling on the omentum. One of the coils of small intestines near the ileo-cœcal valve was constricted and strangulated so that the patient died. The autopsy also confirmed the correctness of the diagnosis — double uterus, with sarcoma and hydrometra of the left half. The section of the tumor showed the walls of the

uterus very much increased in thickness, especially at the fundus. The sarcomatous part was principally in the fundus. The inner surface of the uterus was ragged, macerated, and stained with blood. The cervical canal could be made out, though not very distinctly. The other part of the uterus was normal.

This case is interesting, especially as double uterus is rare, and with sarcoma and hydrometra very exceptional. Dr. Freund said that he had never seen such a case before. The examination of the tumor with the microscope proved it to be a spindle-celled sarcoma.

[In the *American Journal of Obstetrics*, February, 1875, four cases of echinococcus in the female pelvis were reported by Drs. Freund and Chadwick. The Case No. II., of Miss J., is interesting as proving that the diagnosis which was made was correct. The patient died this last May, and at the autopsy it was found that plates 3 and 4 were correct. The specimen was shown before the Schlesischer Medical Society in June, 1876. Since the report was written a sac had appeared on the anterior wall of the uterus, of the size of an apple. All these sacs were subperitoneal, a fact which Dr. Freund lays some stress on, and says that with echinococcus about the uterus it is always the case.]

BRESLAU, *July*, 1876.

RECENT PROGRESS IN OBSTETRICS AND GYNÆCOLOGY.[1]

BY W. L. RICHARDSON, M. D.

GYNÆCOLOGY.

Differential Diagnosis between Subperitoneal Serous Cysts and Ovarian Serous Cysts.[1] — Dr. Kœberlé gives the following summary of the main points of difference between these two diseases. The differential diagnosis rests mainly on the presence or absence of albuminous compounds in the liquid contents of the cysts. The fluid from ovarian cysts is generally ropy and viscid, while that from subperitoneal cysts is fluid and limpid. Ovarian cysts furnish a liquid containing a large amount of albumen and especially of paralbumen. On adding nitric acid the albumen is precipitated and this precipitate either remains unchanged or increases in amount on the addition of acetic acid. Paralbumen is also precipitated by nitric acid, but the precipitate at once disappears on the addition of acetic acid.

Subperitoneal serous cysts are unilocular, and the fluctuation found in them is very manifest, owing to the thinness of the walls. On the other hand, ovarian cysts are either unilocular or multilocular. The cysts of the broad ligament do not as a rule contain any albuminous compound. The cysts of the Fallopian tube contain albumen, but no

[1] Concluded from page 197.

[1] La France médicale, may 13, 1876.

paralbumen. In cases where the liquid is thick or greasy, and is found to contain epidermis and hair, it is ovarian. Colloid and dermoid cysts may contain no albuminous compound. The development of both subperitoneal and ovarian cysts is slow. The presence of the former is not incompatible with good health.

Dr. Julius Pauly[1] discusses at great length the nature of dermoid cysts of the ovary, giving references to two hundred and forty-five cases.

Incision and Discission of the Cervix Uteri.[2] — In a paper read before the New York Academy of Medicine June 1, 1876, Dr. E. R. Peaslee treats at considerable length of the various methods of performing tracheotomy which have come into general use at the present day. The advantage of the operation in the treatment of many cases of dysmenorrhœa and sterility depending upon stenosis of the cervical canal is admitted by all gynæcologists; the only difference of opinion found is as to the best method of performing the operation. The two authoritative methods of procedure hitherto have been either by the use of Simpson's metrotome, by which a deep incision of the cervical canal is made, or by the scissors, as recommended by Sims, by which a discission of the cervix is effected.

By the former operation a very deep and extensive cut is made, and as a consequence there is great danger of a profuse and even fatal hæmorrhage, pelvic cellulitis, or a septic peritonitis. The peritoneal cavity may even be cut into. The difficulty with the operation, as a method of cure, apart from the dangers liable to accompany its performance, is that the incision often gradually closes up, so that the relief from the dysmenorrhœa is at best only temporary; while not unfrequently, owing to the contraction of the cicatrix, the dysmenorrhœa is rendered subsequently even more severe than it was before the operation. As a cure for sterility it promises even less, since the enlarged, open cervical canal allows a premature escape of the ovum, and thus less readily favors the retention of the spermatic fluids.

According to Sims's method of procedure the whole of the vaginal portion of the cervix is cut, up to its vaginal attachment on both sides, and an incision of the whole canal above and including both sides of the os internum is made. The same danger exists here, as regards hæmorrhage, pelvic cellulitis, and septic peritonitis, as existed in the operation recommended by Simpson. Moreover, the cervical canal is shortened by an amount precisely equal to the length of its vaginal portion, or on an average nearly half an inch; for its discission on both sides practically annihilates it as completely as if it had been entirely removed by amputation. The dysmenorrhœa may be and gen-

[1] Beiträge zur Geburt. und Gynæk., No. 1.

[2] Amer. Jour. of Obstet., August, 1876.

erally is thus relieved when it is dependent upon stenosis; but the sterility remains, and a marked predisposition to abortion, should pregnancy occur, is brought about, since the two pendulous flaps act as valves to hinder the entrance of the spermatic fluid within the cervical canal, and the retentive power of the uterus is also greatly destroyed.

With a view of proposing some more rational form of treatment, Dr. Peaslee first endeavored to ascertain the lowest average diameter of the two ora uteri in parous women who are neither sterile nor suffering from dysmenorrhœa, as thus some rational standard would be reached by which the extent of incision actually required could be ascertained. After a great deal of observation he found that the inner os presents nearly twice the area of that of the imparous woman, and he regards a diameter of one fifth of an inch as ample for the removal of sterility or dysmenorrhœa. The external os should be one fourth of an inch. No narrowing should of course exist between these two ora. It is well, however, to dilate the openings a little wider than these measurements, so as to be sure of a cure, especially in cases of an existing congestion of the cervical lining membrane. The operation which Dr. Peaslee suggests consists in merely cutting the point of narrowing to such a degree as will admit of the passage of a sound of the required size. The instrument used is a flattened tube containing a blade. The advantages of this method of treatment are that the normal dimensions of the cervical canal are obtained with certainty and by means of symmetrical incisions on each side. There is no danger from hæmorrhage, pelvic cellulitis, or septic peritonitis. There is no tendency, moreover, to produce sterility, or any tendency to abortion, nor is there any subsequent attempt made by nature to close up the cervical canal after the operation.

Cancer of the Cervix Uteri.[1] — Dr. Charles Liebman believes that uterine cancer begins not infrequently in the cervical canal. In support of this idea he reports four cases in which the growth of the disease began upon the mucous membrane of the cervix uteri. Recognizing the fact that cancer of the neck of the uterus may spread much higher on the lining membrane of the cervical cavity than on the exterior part of the neck, he advises that a careful examination should always be made with a view of ascertaining whether the cervical mucous membrane is not degenerated. In cases where the growth within the cervix can be removed by means of a scoop, he advises its immediate removal. The amputation of the neck is useless in all cases of cancer with the exception of pedunculated, cancroid, papillary tumors of the lips.

Differential Diagnosis between Pelvic Hæmatocele and Pelvic Cellulitis.[2] — Dr. Fordyce Barker gives the following guides as bearing on a

[1] Trans. Lond. Obs. Soc., xvii. 66.

[2] Richmond and Louisville Medical Journal, January, 1876.

differential diagnosis between these two lesions. Both are situated in the pelvic cavity and are immediately in contact with the uterus. During the progress of both a tumor is developed within the pelvis, and there are the symptoms of a more or less well-marked pelvic peritonitis, which usually gives rise to uterine adhesions. Both have their origin in some predisposing disturbance of the uterus or its appendages.

Hæmatocele is generally associated with some catamenial irregularities, and occasionally with abortion. It however never results from a previous parturition, while on the contrary a pelvic cellulitis frequently accompanies the puerperal state or is the direct consequence of an abortion or of some inflammatory process going on in some of the pelvic organs. Hæmatocele is either ushered in or attended frequently with some hæmorrhage, which is rarely the case in cellulitis. Moreover, the tumor forms very rapidly, oftentimes within a few hours. In cellulitis the process of growth occupies a number of days. In the former disease the tumor is at first found to be yielding and elastic, and becomes harder only at a later period; while in the latter the tumor is at first hard and subsequently becomes softer. The formation of a tumor marks the beginning of a case of hæmatocele, while it is discovered only late when we are dealing with a pelvic cellulitis, being the result of the preëxisting inflammation. In hæmatocele the tumor will be found to be entirely distinct from the uterus, and to possess considerable volume; in fact, the uterus will frequently be displaced laterally and anteriorly, the os pointing backwards. In cellulitis, however, the tumor belongs apparently to one side or the other of the uterus, which is rarely perceptibly displaced by it. An hæmatocele is ushered in by all the usual symptoms which accompany a nervous prostration or shock, and may then be followed by those which attend a pelvic or general peritonitis; while a cellulitis begins with all the general and local symptoms of some acute inflammatory process.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

O. W. DOE, M. D., SECRETARY.

JUNE 5, 1876. *Marriage of Near Kin; its Bearing on the Statistics of Retinitis Pigmentosa.* — On this subject DR. DERBY read a paper, which he reserved for publication.

DR. WADSWORTH referred to the fact that Mannhardt in Constantinople and also McNamara in India have frequently observed cases of this disease, though intermarriages are interdicted by the custom of those countries. He thought that in other diseases characterized by pigmentation of the retina, there would be found about the same proportion of cases of consanguinity as

in retinitis pigmentosa proper, and inquired of Dr. Derby if he considered this disease more than some others especially associated with intermarriage.

Dr. Derby said he did not.

Dr. Bolles asked if the disease was hereditary, and also if night-blindness, associated with narrowing of the field of vision, was diagnostic of this affection.

Dr. Derby replied that it was yet an unsettled point as regards its hereditary nature; and with reference to its diagnosis he thought it well confirmed if the night-blindness came on at an early age, attended with narrowing of the field of vision, and the disease had been progressive in its character.

Dr. Amory thought that the tendency to intensification of disease was a point often overlooked, and suggested that when there was an hereditary tendency to any special disease in a family, it might be greatly intensified in the offspring, should intermarriage take place.

Dr. Derby said he had been unable to trace any hereditary disease in his seventeen cases reported.

Dr. Hay inquired if there was often alteration in the optic disk and retinal vessels in this disease.

Dr. Derby replied that usually the vessels were smaller, and the color of the optic nerve was somewhat altered.

Removal of a Needle from the Abdominal Wall. — Dr. Brown reported a case in which he had removed a needle, an inch and a half long, from the abdomen of a child eleven months old. The child had been playing on the floor and was suddenly noticed to scream, and continued to do so, especially when taken up or moved. The child was seen four hours later. At that time a puncture was found about one and a half inches above and one inch to the left of the umbilicus, and a protrusion, as if from a foreign body about quarter of an inch distant. On cutting down at this place a needle was reached and was removed by forceps. Its direction was antero-posterior. One week later the child was reported as having been fretful for a few hours, but was then entirely well.

Opium Poisoning. — Dr. Bolles reported the following case. A male infant of nine months had cold with a cough and some accumulation of mucus in the throat, for which he was given at half past five in the afternoon two eight-grain Dover's powders by mistake for ipecacuanha: As he did not vomit, a third powder was given at six o'clock, making twenty-four grains in all. At about quarter past six he vomited a little.

Shortly after the first dose he became dull and sleepy, and grew more and more so until eight o'clock, when medical aid was called. He was then in a profound stupor, from which he could not be thoroughly aroused. The eyes were half closed and the pupils contracted to about the thirtieth of an inch, irresponsive to light. He could be made to start by tickling the feet and pinching, and would kick and turn away, but no further signs of consciousness could be elicited. He would not cry or follow an object with the eyes. Sulphate of zinc was given, with plenty of warm water, which acted in about fifteen minutes, the water being returned apparently as clear as when taken. Coffee, as soon as it could be obtained, was given from time to time, and the usual means of awakening the patient resorted to. One twelfth of a minim

of the fluid extract of belladonna was repeated four times in the two or three succeeding hours.

The symptoms ceased to grow worse at about ten o'clock, and began to ameliorate at midnight, though he was kept in motion for two hours after, when he was held in the lap and allowed partial quiet.

Next day he was pretty well, but on the day following vomited nearly everything taken. In two days more, recovery was complete.

Drs. Stedman and Edes saw the patient in consultation with Dr. Bolles.

DR. ARNOLD inquired if belladonna was generally found efficacious in opium poisoning.

DR. BOLLES said that in his case the child appeared much brighter after the first dose, and dilatation of the pupil soon followed after the third and fourth doses.

DR. OLIVER mentioned the case of an old lady who took by mistake half an ounce of laudanum. Previously ten drops had been sufficient to relieve her of pain. Dr. Oliver saw her two hours after the laudanum had been taken, and found her cyanotic, with pupils contracted and pulse 70°. One sixtieth of a grain of sulphate of atropia was twice injected subcutaneously, followed by the administration of strong coffee and two injections subcutaneously of thirty drops of brandy each. Patient first began to show signs of recovery four hours after.

DR. ARNOLD referred to two cases where one thirtieth of a grain of sulphate of atropia had been given subcutaneously and repeated in an hour. The pupils became dilated, but no relief followed.

DR. EDES mentioned a case where one fortieth of a grain of sulphate of atropia was twice administered, producing dilatation of the pupil without any improvement in the symptoms.

REGISTRATION REPORT OF MASSACHUSETTS.[1]

THIS volume contains the vital statistics of Massachusetts for 1874, arranged in the form of tables, and accompanied by some eighty pages of "summary observations," in which the facts contained in the tables are carefully analyzed, compared, and discussed. The task of furnishing these valuable editorial remarks, without which the report would be little more than an unintelligible mass of figures, has for the last two years, since the death of Dr. G. Derby, been intrusted to Dr. F. W. Draper, who here contributes his second yearly installment of this most useful work.

An adage exists to the effect that the forest would be easily seen were it not for the trees. So also with statistics, obscurity results from the multiplicity of facts brought together for consideration. Were it not for the assistance afforded by Dr. Draper, whose lucid comments give us, as it were, a bird's-eye view of the forest spread out beneath our gaze, we should be little the wiser

[1] *The Thirty-Third Registration Report of Massachusetts. Births, Marriages, and Deaths for the Year ending December* 31, 1874. Prepared under the direction of the Secretary of the Commonwealth. With Editorial Remarks by F. W. Draper, M. D. Boston. 1876.

for conning the array of figures and tables which make up the chief part of this report.

"The birth-rate for 1874," says Dr. Draper, "is the same as that for 1873, while the death-rate is less. The disturbing effects wrought by the civil war upon the birth-rate, growing out of the absence and loss of many adult males, are progressively disappearing." As regards the proportion of the sexes, it is shown that to every 100 girls, 107.7 boys were born. The proportion in England, on the other hand, is 104 boys to 100 girls. The great excess of females over males in this State, which contains 108 females to every 100 males, is therefore not due to any relative deficiency of male births, but results chiefly from emigration of males and immigration of females.

A curious fact observed each year in our community is the predominance of females (334) as compared with males (312) among *illegitimate* births. In England illegitimate births are more productive of male children than legitimate births.

"Those children whose father was foreign and whose mother was American outnumbered those whose father was American and whose mother was foreign by 1000." This we take to result not so much from superior fecundity, as from the greater frequency of marriages in which a foreign husband marries a native wife, as compared with marriages in which the mixed nativities are reversed.

The marriage rate is shown to have declined somewhat in 1874, being only 9.66 per 1000 living, against a mean of 11 per 1000 for the nine years preceding.

With regard to mortality, the death-rate in 1874 was 19.79 per 1000, exceeding very slightly the decennial mean death-rate of Massachusetts. No extensive epidemic prevailed. Deaths by small-pox were only 26 in number, showing how few predisposed individuals were left untouched by the great epidemic of 1872–73, which proved fatal to 1697 persons.

Consumption is shown by Dr. Draper to be more prevalent among females (3.47 per 1000 living) than among males (3.80 per 1000). In England, on the other hand, the male sex shows a slightly greater liability to phthisis than the female. We would suggest that the explanation of the greater prevalence of phthisis among females in our community is perhaps to be found in the great excess of adult females of exotic origin, chiefly Irish, who add to our female population an excess of individuals at ages and of a nativity which constitute a predisposition to tubercular disease. The differences as regards age-distribution and nativity existing between our male and female populations are quite remarkable. Thus, in 1865, while at all ages there were to every 100 males 108 females, there were at ages from 20 to 30 years as many as 145 females to every 100 males. With regard to nativity, among males 20 per cent. were foreign, while among females the proportion of foreigners was 21.7 per cent., the excess of foreign-born females consisting chiefly of adults.

In conclusion, we are glad to take this opportunity to express our sense of the deep obligation under which Dr. Draper has laid the community by his constant, able, and painstaking devotion to its sanitary interests.

ZIEMSSEN'S CYCLOPÆDIA.[1]

THE present volume, like the tenth, is entirely the work of one author, and consequently presents an evenness that cannot be expected when different writers treat of allied subjects. The translation also is entirely done by a single writer, Mr. Henry Power, of London, and is extremely satisfactory. The work treats of subjects that have attracted great attention, which, however, are still surrounded by obscurity. Increased study makes only more evident the need of additional research into the anatomy and physiology of the nervous system, and daily experience shows the value of electricity as a means of diagnosis and as a method of treatment. This branch is consequently becoming more and more freely recognized as a specialty, but it nevertheless is so wide-spread, and its phenomena are so intimately connected as symptoms, causes, and results with other troubles, that it is not one of which the general practitioner can afford to be ignorant. This book will be of value to him in particular, for, though it is a convenient handbook for the specialist, we are not aware that he will find much in it that is absolutely new to him. The neuroses of the sensory nerves, which practically mean neuralgia, are discussed first; next come those of the nerves of special sense, and then those of the motor nerves, which are chiefly made manifest by spasm or paralysis. This constitutes the first part, which occupies nearly the whole of the book. The second part — less than thirty pages — treats of what the author calls the anatomical diseases, namely, inflammation, hypertrophy, atrophy, etc. The diseases of the sensory nerves are naturally preceded by a consideration of the nature of pain, which is interesting and intelligible. We entirely agree with Professor Erb that there is no reason to believe that pain is essentially a distinct sensation, or that it is conveyed by special nerves. Impressions at first painful sometimes cease to be so when we become used to them, and on the other hand pleasant ones may become painful when long continued. "We hold," says the author, "that every increase of ordinary sensory stimuli is capable of producing pain, as soon as it attains a certain intensity," and he points out that the result is the same, if, instead of an increase in intensity of the impulse, we have a greater sensibility of the receptive apparatus. He shows also that, while pain may occasion a new and distinct impression, this is because this precise form of excitation is a new experience, not because it is of a specific nature. He does not, however, dispute Shiff's discovery that the course of pain in the spinal cord is not the same as that of tactile sensation, the former being in the gray matter and the latter in the posterior white columns, but simply says that the question must remain undecided whether there is truly a distinct path for pain or whether it produces phenomena in the gray matter distinct from conduction. It seems to us that the most plausible theory is that, while moderate stimuli have a certain path, excessive ones may take another course, and not impossibly give rise to the pain by so doing. There is no occasion for much comment on the treatment. Erb approves of

[1] *Cyclopædia of the Practice of Medicine Diseases of the Peripheral Cerebro-Spinal Nerves.* By PROFESSOR W. H. ERB. Translated by MR. HENRY POWER. Edited by ALBERT H. BUCK, M. D. Vol. XI. New York: Wm. Wood & Co. 1876.

injecting morphia near the affected part rather than at a distance, though not in facial neuralgia. He finds the results of operative interference on the whole satisfactory, but makes the suggestion, which certainly deserves a trial, that repeated division of a nerve may be preferable to a severe operation for the resection of a considerable piece. He is a strong advocate of the galvanic current in sciatica. The description of paralysis of special nerves is very interesting. We wish that he had given some statistics of the frequency of paralysis of the circumflex nerve that supplies the deltoid after injuries of the shoulder. He speaks of them as a common cause, but unless we are mistaken such injuries are followed by a local paralysis far more frequently than is generally supposed. To conclude, in a word, we can recommend this volume as both valuable and interesting.

AUTUMNAL CATARRH[1] AND HAY FEVER.[2]

At this season, when the victims of autumnal catarrh are flocking to the mountains to escape their disabling malady, the new edition of Dr. Wyman's valuable work will be received with great interest by all professional men as well as by the army of sufferers from this mysterious disease. The present edition, lately published by Hurd and Houghton in their usual unexceptionable style, is substantially the same as the earlier one, which appeared in 1872. There are some alterations in the maps illustrating the limits of the catarrhal regions, to correspond with later knowledge, and valuable additions scattered throughout the book, which may be considered as a standard authority on the subjects of which it treats. The author confines himself mainly to the autumnal catarrh, but in connection with it has also investigated with care the June cold or hay fever, regarding the two diseases as distinct though similar. His deductions are drawn from the histories of a hundred cases, most of which were carefully examined and observed by himself, a few by other competent observers.

The absolute identity of our June cold with the English hay fever, which is assumed by some writers, Dr. Wyman regards as doubtful, since a residence in England during the month of June has conferred exemption in the cases of those who had been subject to an annual catarrh in the same month here. There is a wide difference between our autumnal catarrh, which is unknown elsewhere, as described by the author, and both the above-mentioned affections. One of the most interesting points in the history of this disease is that all the cases agree in the time of annual return, about the 20th of August, in some cases on precisely the same day. After an account of the catarrhal, bronchial,

[1] *Autumnal Catarrh (Hay Fever), with Illustrative Maps.* By Morrill Wyman, M. D., late Hersey Professor Adjunct of the Theory and Practice of Medicine in Harvard University, etc., etc. New York: Published by Hurd and Houghton; Cambridge: The Riverside Press. 1876.

[2] *Hay Fever or Summer Catarrh: Its Nature and Treatment.* Including the Early Form, or "Rose Cold;" the Later Form, or "Autumnal Catarrh;" and a Middle Form, or July Cold, hitherto undescribed. By George M. Beard, A. M., M. D., Fellow of the New York Academy of Medicine, etc., etc. New York: Harper and Brothers. 1876.

asthmatic, and nervous symptoms, the author describes at length the geographical limits of the disease with the aid of several colored maps, remarking that the southern and western boundaries must be left as undetermined until further evidence is obtained, though the disease has not been proved to exist to any great extent south of latitude 35°, nor does it extend into the colder regions of Canada. "That is, it is confined between the parallels of 35° and 47° north latitude. But it does not occupy the whole of this region; it is not found in the extreme east of the continent, nor on the Pacific coast." In the region excluded, however, it is mentioned that persons have suffered at Washington, Ga., Beaufort, S. C., St. Augustine, and Galveston, as well as at Denver, Colorado Springs, and Golden City, localities which are from five thousand to sixty-three hundred feet above the sea, and which have been supposed to be curative. Therefore it is stated that many points relating to the geographical distribution of the disease must be left for further investigation.

The non-catarrhal regions, which are indicated by the uncolored portion of the maps, comprise parts of the White Mountains, especially the Glen, Gorham, Jefferson, Bethlehem, and other places; localities in the Green Mountains, Catskills, Adirondacks, and other elevated regions. Though elevation is not the only requisite, few places afford relief which are not more than eight hundred feet above the sea level. A sea voyage is always curative. The author expresses the opinion "that the conditions upon which exemption from the disease depends would be very likely to vary, not only in different places, but in the same place in different years." This seems to have been the case in 1875, when many persons at the White Mountains were less relieved than usual. As a rule, however, "the change in a sufferer fully under the influence of his malady, on arriving at the mountains, is sudden and striking. His first night's sleep is refreshing, and in the morning his most annoying symptoms — the itching and watering of the eyes, the sneezing and nose-blowing, or the asthma — have much diminished. A second night gives still more relief, and usually in the course of the following day most of the symptoms disappear. Besides this relief of the local symptoms, a still greater change takes place in the spirits."

In seeking for the causes of this malady Dr. Wyman finds that the proportion of males to females affected is about three to one; that the disease is less frequent among those who labor in the open air than among those who have indoor occupations; and that the autumnal catarrh is on the increase, perhaps owing to the change of condition and habits of the people. With regard to this point the author makes some interesting suggestions which want of space does not allow us to quote. Family and individual predispositions play an important part in the causation, and, on inquiring as to the system or systems in which this predisposition may lie, the conclusion is reached that the combination of symptoms "certainly corresponds better with what we know of derangements of the nervous system than with those of the mucous membrane or the organs by which it is invested." Again, "it may also be remarked that injuries of the sympathetic are followed by a series of changes which includes many of those observed in this disease;" and "the little alleviation under any medical treatment except that addressed to the nervous system, its sudden

onset, its tumultuous course and transitory character, lead us to suppose that the cause may act first upon the nervous system, and perhaps principally upon the great sympathetic."

Among the causes of paroxysms are dust and smoke, strong light, sunshine, various kinds of fruit and flowers, the pollen of corn, and especially Roman wormwood (*Ambrosia artemisiæfolia*). The common impression that this latter plant is a cause of the whole disease led the author to make interesting experiments with it at different seasons of the year, with negative results as to causation. Nor can the "germ theory" be brought to do service in determining the real origin of the whole affection, of which but little is known. "But we are to remember that even if we did know its origin and nature, it would by no means follow that our success in its prevention or treatment would exceed that we now have with our present knowledge of the character of its symptoms."

With regard to the diagnosis there is a caution against confounding the autumnal catarrh with the June cold, as there are many points of resemblance, but also marked differences. The latter is found quite far to the South, "and is probably more extensive geographically than the autumnal catarrh." "Those who have June cold are seldom subjects of autumnal catarrh. When June cold has existed, it has generally ceased on the appearance of the latter disease." The following table shows the points of differential diagnosis as given by the author:—

JUNE CATARRH OF NORTHERN UNITED STATES.	AUTUMNAL CATARRH.
Time of annual attack: May, June.	Time of annual attack: August, September.
Affection of eyes moderate, throat occasionally sore.	Affection of eyes, nose, and throat severe.
Edge of eyelids not inflamed.	Edge of eyelids inflamed.
Eyelids not puffy.	Eyelids puffy.
Cough not spasmodic.	Cough spasmodic.
Asthma not common.	Asthma common towards close.
No itching of skin, no eruption.	Itching of skin, with eruptions slow in healing.
Generally much relieved at the sea-coast, and in large cities.	Rarely relieved at the sea-coast or in large cities.
Paroxysms generally produced by new-cut hay, and by the aroma of flowers.	Paroxysms not produced by new-cut hay; seldom produced by the aroma of flowers.
Not generally relieved in the mountains during hay-making.	Entire relief in certain regions.

In regard to the prognosis, it is satisfactory to notice that Daniel Webster, who had the disease for twenty years, reached the age of seventy, Chief Justice Shaw eighty, another gentleman eighty-four, and Samuel Batchelder is now ninety-two. Other instances of longevity are given, and the disease does not materially shorten life.

Removal to a non-catarrhal region is "the great, almost unfailing remedy," and it is not safe to return until the end of September. From places farther south a longer absence is necessary.

The internal use of quinine for a fortnight before, and during, the disease is beneficial, but injections of solutions of quinine, as recommended by Helmholtz on the supposition that the disease is dependent upon vibrios, have often caused

irritation. A watery solution without any acid, used with an atomizer, often gives relief.

A detailed history of many cases, some of them not in the former edition, and a valuable table of the heights of villages and hotels in the non-catarrhal regions, complete this interesting volume.

Dr. G. M. Beard, in a recent publication on Hay Fever or Summer Catarrh, claims that the two forms of catarrh occurring in June and September are identical, and, moreover, that there is an intermediate form, beginning in July, which has not been previously described. He also states that all forms of the disease in all countries are essentially the same, and all dependent on one cause, a functional disease of the nervous system, a neurosis. Dr. Beard arrives at this conclusion from the analysis of the answers to fifty-five questions with regard to the residence, temperament, hereditary predisposition, date of attack, exciting causes, nature of symptoms, etc. These questions were distributed quite extensively in the form of a circular, and answers were received with regard to some two hundred cases. One half only of the cases, however, were observed by himself or by other physicians, and in view of the liability to errors of diagnosis in cases reported by unprofessional observers, it seems as if a smaller number of cases more thoroughly investigated might be of greater scientific value. Though the author hardly settles the problem as to the nature of hay fever so satisfactorily to our mind as he appears to have done to his own, many points of interest are developed. With regard to the localities in which hay fever is liable to occur, cases are recorded from most of the States east of the Rocky Mountains, south as well as north. Some regions supposed to be exempt from autumnal catarrh are said to contain many cases of hay fever. This may be accounted for by the fact that the two diseases have different limits, or future research may show that the supposed limits require modification.

This book is in the main corroborative of Dr. Wyman's previous work. It is interesting to notice that, of the two hundred cases collected, twenty-seven were of the early or June form, nineteen of the so-called July form, and one hundred and fifty-two of the autumnal variety. With regard to the existence of a July group Dr. Wyman says, "If this be so, the separation of the June and September groups is established. Any two groups between which there is a third must be separate. A description which confounds June cold and autumnal catarrh does not exactly suit either separately, either in the time of attack, the causes of paroxysms, the geographical distribution, or the means of relief. It may be observed that Dr. Phoebus records no distinct group in July, although he mentions that a few cases thus occur."

The theory of the nervous origin of the disease is more satisfactory than any of the other hypotheses, and is in accordance with Dr. Wyman's original suggestions, which are quoted above, but are not alluded to by Dr. Beard.

In the way of treatment, a mild galvanic current, applied both centrally and locally, is said to have proved of immediate benefit in two cases, but the particulars are not given. Dr. Hutchinson, of Providence, reported a case treated in a similar manner, in the JOURNAL of November 5, 1874, which Dr. Wy-

man criticises by saying that the supposed cure coincided with the natural time of disappearance of the disease. Dr. Hutchinson, however, in a later communication, attributes a permanent beneficial effect to the galvanization, since the symptoms in 1875 were much milder than in previous years.

Dr. Beard's book is of convenient size for popular distribution, of attractive appearance, and will no doubt be extensively read.

THE LATE DR. CHANNING.

FEW physicians in New England will read without thoughtful interest the record of the death of Dr. Walter Channing, which took place on the 27th of July at his home in Brookline, near Boston. Born in Newport, Rhode Island, on the fifteenth day of April, 1786, he had reached the ripe age of ninety years. His parents and his ancestors were people of high social and intellectual position. The fame of his elder brother, the Rev. William Ellery Channing, is wide-spread. Many generations of Cambridge students remember with gratitude the professional work of Edward T. Channing, his younger brother, who long filled the chair of rhetoric at Harvard.

Walter Channing entered Harvard College in 1804. In the middle of his Junior year the well-known students' rebellion interrupted his studies. On that account he left college, and, beginning the study of medicine, pursued it for several years with eager diligence in Boston and at Philadelphia, in Edinburgh and London, giving special attention to the subject of obstetrics throughout this period. He established himself in the practice of medicine at Boston in 1812, was appointed in the same year lecturer on obstetrics at the medical college, and only three years later he became full professor in that branch. For nearly forty years he ably held his post of honor and trust.

Social and professional advantages such as Dr. Channing thus early won, and which he long continued to retain, might not unreasonably have been considered pledges of inevitable success. But every man who encountered him in his round of duty learned how unjust it was to attribute to accidents of fortune the eminence which he achieved. The obstetrical science of his time may indeed have been, when measured with the brilliant work of the last twenty years, only what the dawn is to the noon-day; but such as it was, he had in utterly mastering it, gained the best ground, indeed the only real ground, both as professor and accoucheur, for honest self-esteem. He had diligently, thoroughly, studied and learned, both here and abroad, the whole compass of his department, as that department was then known. To obstetrics he had given the enthusiastic interest of a rarely bright and intelligent mind. He knew that he possessed the art which he undertook to explain to others. He felt that he had the power and the right to assume that service of suffering women to which he was summoned.

Dr. Channing's mind, brilliant, fanciful, discursive, apt as it was, perhaps lacked that capacity for steady methodical persistence in intellectual toil which has come to be in our day indispensable for the highest attainments in teaching. The modern professor of obstetrics must hold high the torch of

knowledge among a crowd of trained men, themselves almost fitted to give instruction. But for success in Dr. Channing's time, other qualifications were needed than a thorough mastery of the subject, with clearness, force, and brevity in presenting it. Beyond all this, the professor was then expected to hold the attention of the indolent, to rouse the interest of the indifferent, to add a spur even to those who were most willing to work. For all these duties nature had bestowed upon Dr. Channing rare gifts and endowments. Fun was born in him. "No!" said he to the stranger who rang his door-bell, in search of his famous brother; "he is the man who preaches, but I practice." Worn out with fruitless attempts to talk down an organ grinder, whose melody flooded his lecture room, one summer forenoon, he took his seat at last with, "Apollo, gentlemen, was the god of music as well as of physic."

It is pleasant to record the well-remembered fact that he received, late in life, a bequest of several thousand dollars from a patient whom he had only once seen, years before, when called to her at a moment of extreme peril.

When the Massachusetts General Hospital was organized, Dr. Channing was appointed assistant to the late Dr. James Jackson, the attending physician. His connection with that hospital continued for more than twenty years. Dr. Channing, Dr. Storer, Senior, and the late excellent and honored Dr. Charles G. Putnam were for a very long period the associate accoucheurs of the Boston Lying-In Hospital. To the literature of the medical profession Dr. Channing was a frequent and valued contributor. His most important work, Etherization in Childbirth, contains the report of many hundred cases of the early administration of that anæsthetic, and bears testimony to the zeal with which he had encouraged and urged its employment during labor.

Dr. Channing's eager advocacy by pen and voice of a very great number of interests, social and reformatory, will not be forgotten. For some years before his death, he had retired from the active duties of his calling. No pain attended his final illness, and its close was eminently peaceful and calm.

AMERICAN SOCIAL SCIENCE ASSOCIATION.

THE general meeting of the association will be opened at Saratoga, September 5th, lasting four days. Mr. David A. Wells, of Norwich, Connecticut, is the president, and Mr. F. B. Sanborn, of Concord, Massachusetts, is the secretary. The proceedings will open by an address from the president, entitled The Present Industrial, Commercial, and Financial Depression, its Causes and Remedies. He will preside on Tuesday evening and Wednesday morning at the general session. Among the numerous interesting features of the general session we notice a debate on Chinese Immigration to the Pacific States, in which Senator Sargent, of California, will participate. The conference of charities will form a prominent feature of this meeting, all organizations which administer on a large scale either public or private charity throughout the country being invited to attend. During this conference a report will be made by the standing committee on Insanity, covering papers by Dr. Allen, of Massachusetts, Dr. H. B. Wilbur, of Syracuse, Dr. Edward C. Mann, of Ward's Island. New

York, and others. This will doubtless prove unusually interesting in view of the criticisms which have been made recently by a foreign contemporary upon the treatment of the insane in this country. There will also be a report from the standing committee on Medical Charities and Out-Door Relief, followed by a debate. The following is the programme of the Department of Health, at the meeting of which the Hon. B. G. Northrop will preside: A report upon The Health of Schools, by the secretary of the department, Dr. D. F. Lincoln, of Boston. Papers upon Diseases of the Eye and Ear in Schools, namely: (*a.*) Statistics of Examinations in Portland, Me., by Dr. James A. Spalding. (*b.*) General Results of European Examinations, by Dr. O. F. Wadsworth, of Boston. (*c.*) The Method of Testing for Deafness, with Remarks on the Management of Deaf Scholars, by Dr. C. J. Blake, of Boston. A paper on Study and Health, by Hon. B. G. Northrop, Secretary of the State Board of Education of Connecticut. A paper on Sanitary Requirements in School Architecture, with illustrations, by Dr. D. F. Lincoln. A paper on Alcohol as an Article of Diet, by Prof. Robert T. Edes, M. D., of the Harvard Medical School. A discussion on the Prevention of the Spread of Contagious Diseases among School Children. There will be debates on each of these subjects, and all persons are invited to attend the meetings, which will take place in the town hall at Saratoga. The interesting character of the work to be brought before the association, to say nothing of its place of meeting, will undoubtedly insure a large attendance.

MEDICAL NOTES.

— In the summer semester of the Friedrich-Wilhelms-Universitaet of Berlin there are registered 1987 matriculated students, 166 less than in the winter. Of this number 137 are theological, 684 law, 896 philosophical, and 270 medical students. Of the latter, 87 are not Prussians. Of the 1610 matriculated Germans the province of Brandenburg sends 581, old Prussia 181, Pomerania 178, Posen 168, Saxony 162, and Westphalia 74. From the other European states are 159, the majority from Russia and Switzerland; of non-European states, America sends 50, Asia 4, Africa 2, and Australia 1. There are 194 teachers, of whom 15 belong to the theological, 17 to the law, 94 to the philosophical, and 68 to the medical faculties.

— After an illness of several weeks' duration, Dr. Richard Arnold, of Savannah, Ga., died on the 10th of July, in the sixty-eighth year of his age, of acute pulmonary phthisis. After a thorough preparatory course of literary and scientific study at Princeton, New Jersey, he received the degree of doctor of medicine from the Medical Department of the University of Pennsylvania in 1830. Dr. Arnold took an active part in the organization of the Medical Society of the State of Georgia, and as president, in 1851, in Atlanta, delivered an able address upon The Reciprocal Duties of Physicians and of the Public towards each Other. Upon the organization of the Savannah Medical College in 1850, he became professor of the theory and practice of medicine.

— A remarkable case of longevity is reported in Virchow's *Archiv*, by Dr. Ornstein, of Athens. The man, George Stravarides, died in Smyrna, at the

age of 132 years. Although this Methuselah had always lived an irregular life, and had consumed an average of more than a hundred drachms of brandy daily, he retained full possession of all his five senses, as also a complete set of teeth, up to the moment of his death. He also continued to the last to attend to the duties of his avocation — a baker. This man was born in 1743, in the reign of Mahmoud I., and lived during the reigns of nine Sultans.

— The coroner question has received a great deal of attention in England recently. In an article on the subject the *British Medical Journal* makes the following suggestion, which we think a valuable one. That power should be given to the district officer of health to attend and make inquiry into the causes of death, when sudden or not satisfactorily explained, and, if any doubt should exist, the officer should give notice to the coroner to hold an inquest. This would put a check upon unnecessary inquests, and prevent indiscreet intrusion into a house of mourning, whether the deceased belonged to the poor or to the wealthy class. Officers of health should, of course, be adequately paid for these additional duties. In the mere matter of dispensing with unnecessary inquests there would be a saving of expense, which would cover any additional cost on this ground. A power should, as suggested, be given to a coroner to hold an inquest on his own view, or by requisition from competent authority, but only after a consultation with the medical officer of health. The necessity for an inquest is really not dependent on any legal but strictly on medical grounds, where the cause of death is in question.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DRS. CHEEVER AND GAY.

REPORTED BY G. W. GAY, M. D.

Strangulated Hernia; Operation; Tetanus; Death. — E. Y., aged seventy-seven years, cabinet-maker, entered the City Hospital December 3, 1875. The patient had had an inguinal hernia for fifty years. It had always been reducible until twenty hours before he entered the hospital. Pain and vomiting set in within a few hours after the accident, and persisted. On examination there was found a large, hard tumor in the left inguinal region, extending from the bottom of the scrotum up into the inguinal ring.

The patient was immediately etherized, and moderate taxis used without accomplishing anything. Dr. Cheever then performed herniotomy. On opening the sac a small knuckle of intestine was found in the ring, but the larger portion of the tumor was composed of omentum. The latter had probably been irreducible for a long time, as it was very firmly adherent to the sac, and could not be returned to its proper place. The ring was enlarged, and the intestine returned into the peritoneal cavity. A protruding portion of the omentum, which was free but irreducible, was ligated and then cut off, and the stump fastened to the edges of the inguinal ring by sutures. The wound was lightly closed with sutures, and a simple dressing applied.

December 5th, second day after operation. There was considerable swelling

of the scrotum, but no abdominal tenderness. Patient had slept well, and seemed to be doing well.

The next day (December 6th) suppuration was fairly established, pulse was slower, and fever less. Charcoal poultice was applied to the scrotum.

December 7th (fourth day). Pulse 96. No pain. A small bit of the scrotum looked sloughy. No other unfavorable symptoms.

December 8th. Tetanus, involving the masseters and muscles of the neck, came on during the night. The wound looks better. Patient was ordered hypodermic injections of morphia in the cheek, and enemata of beef-tea and brandy.

He died suddenly in a spasm, at eight P. M. Death was probably due to apnœa, produced by the spasm of the laryngeal muscles. No autopsy.

Idiopathic Tetanus; Death. — Peter K., aged twenty-nine, machinist, was admitted to the hospital, under the care of Dr. Cheever, December 19, 1875. He had well-marked trismus, and could not open his mouth. Pulse 94. Temperature 100°. Respiration was labored, and he could swallow only with considerable difficulty. He had received no injury that he was aware of, nor could any signs of an injury be found upon him. Being of intemperate habits, his friends thought he had lain out-of-doors during some of the late very cold weather.

December 20th, eight A. M. Pulse 94. Temperature 100°. Complains of pain in jaws and abdomen. Abdominal muscles firmly contracted and bowels constipated. Can speak very well at times, but is always seized with a spasm while doing so. His eyes are prominent, and the corners of his mouth are drawn down. He cannot swallow, and had no sleep last night. Ordered a hypodermic injection of one quarter of a grain of morphia every two hours.

At noon there was marked opisthotonos. The lower extremities were very rigid, and there was great dyspnœa. At six P. M. his pulse was 96, and temperature 101.4°. He died in a spasm at eight P. M., about twenty-eight hours after admission to the hospital. No autopsy.

Amputation for Injury to Foot; Tetanus; Death. — (Service of Dr. Gay.) Daniel S., laborer, aged fifty-four, entered this hospital August 18, 1875, for the second or third time, with an incurable ulceration upon the heel and sole of his left foot. The ulcer was the result of a railroad injury received twenty-five years ago, for which the three outer metatarsal bones were removed. The soft parts were badly lacerated at the time of the accident, and the foot never healed. He was wholly prevented from doing anything, and demanded an amputation. He was in apparently good condition.

Two days after admission the leg was amputated in its lower third by antero-posterior skin flaps. Hæmorrhage was prevented by Esmarch's bandage, and an attempt was made to secure the arteries by torsion. The posterior tibial artery was easily closed by that method, but, probably owing to our want of experience, we could not isolate the anterior tibial sufficiently to control the vessel by torsion, and hence a ligature, the only one used in the operation, was applied. The stump was dressed with a dry compress and bandage.

Four days after the operation the patient was doing badly. Pulse 104. Temperature 99.2°. The edges of the flaps were livid and sloughy, and there were lines of discoloration running up the leg. The inguinal glands were not

enlarged. The patient was very nervous, and his stump exceedingly sensitive, the gentlest manipulations causing repeated involuntary twitchings and startings.

He continued failing very gradually until August 30th (tenth day), when he complained of slight stiffness of the lower jaw. The wound had commenced to look better. An inch of the anterior flap had sloughed, but there was an attempt at healthy suppuration. His respiration and deglutition were not yet affected. He suffered considerable pain. He was put upon bromide of potassium, thirty grains, with fifteen grains of hydrate of chloral, three times a day. He was also ordered morphia sufficient to relieve pain.

On the fourteenth day (September 3d) his jaws were firmly closed, and he had general tetanus. He took liquids through a tube, but swallowed with great difficulty. His inspiration was labored. Consciousness was partially retained. Had taken morphia freely, with little apparent relief. Ordered sixty grains of bromide of potassium every two hours. Stimulants and food by enemata.

The next day (September 4th) he could open his mouth a little, but he was failing rapidly in strength. His pulse was 148 and very weak, and at night was 200, as near as could be made out by counting every alternate stroke.

September 5th (sixteenth day). All his muscles were completely relaxed. His mouth could be opened easily, and the respiration was free, but he was unconscious, and his face was livid. He died quietly in the evening, free from all spasm or tetanic symptoms. No autopsy.

Three cases of tetanus in less than four months are fortunately a rare occurrence, and, I think, have never before happened in this institution. It is an unaccountable fact that this disease occasionally makes its appearance in the form of an epidemic. Such an epidemic occurred in London in 1858. Tetanus suddenly made its appearance at that time in several of the hospitals there, in one of which there were nine deaths in two months from this affection. It seems to be more prevalent in military than in civil practice, and attacks patients with all sorts of injuries, or those without any injury. The most common exciting cause in the latter class, the so-called idiopathic tetanus, is exposure to cold. This fact seems to be well established, not only in military but also in civil practice. The second case above reported was probably due to this cause. It must be very seldom that herniotomy is complicated with tetanus, although Erichsen mentions it as an occasional occurrence. In the large number of such operations which have been performed in this hospital, this is the first instance in which it has occurred. There was an endemic of hospital gangrene in the house at the time the above case was under treatment, and the question naturally arises, Could that disease have had anything to do in causing the tetanus? It may have acted as a predisposing cause, since whatever lowers the patient's general condition renders him more liable to be attacked by the various secondary affections.

Still more obscure was the cause of the tetanus in the third case above reported. The patient was in a good condition and was not exposed to cold; the hospital was free from all septicæmic affections, and there was nothing unusual in the mode of performing the operation, except it was the torsion of an artery, and it is hardly probable that that could have produced such a fatal dis-

turbance. We know of no possible cause for the disease, unless it was some peculiar condition of the nervous system produced by the long years of pain and irritation which the patient had suffered.

Bromide of potassium, chloral, and morphia were the principal drugs relied upon in the treatment of the case. They were used heroically, but failed to save the patient.

Tracheotomy was not resorted to. Although it might have prolonged life in the first two cases, it is extremely doubtful whether the patients would have recovered.

LETTER FROM WASHINGTON.

Messrs. Editors, — Thermometer 97° in the shade last week. This has been the occasion for much complaint from mothers having an eye to the welfare of their children, and from fretful invalids, but when the reports from other cities, more favored by their northern location, were gathered in, and our Centennial visitors from Philadelphia spoke of the agreeable change, it was interesting to note how much better the heat was borne. There are two things which excite a Washingtonian's resentment, — the charges of malaria and of intense heat as applied to his place of residence, — and with just cause. The reputation which this city gained years ago, when a sparsely populated, rambling, scattered village, clings to it now with full force in certain quarters. No allowance has been made for the changes and improvements by a large increase of population, the paving, sewerage, drainage, and building up of streets that not long since were commons for cows to feed upon, thus confining the influence of malaria to particularly favorable localities. That it does exist in such localities and in full force is one of the strong arguments in the appeal to Congress for such river improvements as would control it entirely, namely, the establishment of a proper channel, restricted within certain bounds, and the reclaiming of acres of marsh land now left to rot in the September sun and to serve as a field of instruction to young surgeons in treating gunshot wounds among the ortolan sportsmen. We no longer hear of the once almost universal practice of giving a good dose of calomel or blue mass, and then quinine, as good for everything from a bone felon to a case of labor.

As to temperature; while we do not have the cool nights which proximity to the sea gives to Boston and possibly New York, yet our broad avenues and streets give us the benefit of any air, from whatever quarter it may come, that may be stirring, an advantage which some of our more closely-built sister cities do not possess; and in no quarter of the city do we have to go more than two or three squares to reach green grass and shady trees, which the children find great comfort in. In the range in the thermometric reading it is curious to note what marked discrepancies will occur. Every one who owns a thermometer immediately sets himself up as an authority, without regard to the accuracy of his instrument or of the propriety of his mode of using it, and ignoring the only true criterion, the observations of the signal office. We are blessed with an army of correspondents, and each correspondent, judging from the newspapers, sends over the country his own ideas of what the thermometer

is or rather should be. A prominent druggist, for instance, has his instrument in the front of his shop, which has a southern exposure, under a light awning, in the closest and hottest part of the town, the sun's rays being reflected most of the day from a broad expanse of pavement. No wonder 102° and higher is reached by the mercury. This is a very good plan for selling soda-water, but highly objectionable to those who are sensitive for the reputation of the city. The signal office reports 98.5° as the maximum, and this on July 11th and 20th only, the minimum for those days being 76.5° and 80.5°.

Congress is still with us, and those away from Washington know probably more of its doings than we do here, except where its legislation directly affects us. The bill introduced to facilitate the obtaining of material for dissection by our colleges, which was admirably drawn up, and would, if passed, have effectually checked all attempts at resurrecting or exportation of such material, with a bill for a less expensive and more effective board of health, taking the latter out of the hands of politicians, have been quietly pocketed by the chairman of the committee to which they were referred, and there they will probably remain, there not being enough moneyed interest or political influence to call them forth among men interested in electioneering schemes. The board of health finds its salaries curtailed to $500 a year per office, with the exception of the health officer, who has $2000. This may result in one of two things: a change in the constitution of the members of the board, or, if the law governing some branches of the government, that no one man shall draw salaries pertaining to more than one office, does not hold good in this instance, a multiplying of offices for some of the members.

The hospitals seem to be well provided for in the appropriation bills. There is no summer work going on with them or with the colleges. Of the latter, the Georgetown Medical College has entirely reorganized its faculty, there being none of the old members remaining, with the exception of Dr. Reyburn, the former professor of the principles of surgery, now professor of anatomy and dean, ranking third in the list. Dr. Busey, who lectured last session upon the diseases of children, now heads the list as professor of the theory and practice of medicine. The faculty of the Medical Department of the Columbian University remains as before, and this year they have adopted, optionally to the student, the suggestion of the late convention of medical colleges, of a final examination, at the end of the second year, in chemistry, materia medica, anatomy, and physiology, and they have also instituted a prize for the best general final examination, which is to be both oral and written. These are progressive steps, though hesitatingly made, and they are indicative of a too great fear of and dependence upon the students themselves. Still it is an endeavor not to be left too far behind, and may lead to positive graded instruction and thorough final examinations.

The medical societies have suspended their meetings during the warmer months, the Philosophical Society having also discontinued its meetings. This latter, though not properly medical, contains among its members a large proportion of medical men who are interested in general scientific work, and deserves more than a passing mention. It was organized in 1871, holds bi-weekly meetings, and includes among its members (some one hundred and twenty-four

in number) almost all of the men of education interested in scientific pursuits who spend their winters in Washington. . This is saying a good deal, as Professor Henry, who has been president since the society was organized, stated in his address, November 18, 1871, that "there is no city in the United States, in proportion to the number of its inhabitants, where there are so many men of education actively engaged in pursuits connected with science as in Washington," "or so many facilities for scientific investigation." One peculiarity which strikes the observer as being rather odd is the ignoring of titles, so that the assemblage of professors, doctors, admirals, generals, etc., all come down to the plain Mr., both in address and in the printed record. This seems to have been a happy thought for getting rid of the overflow of titles with which Washington abounds, but it requires training to put in practice. From time to time prominent scientists, such as Professor Tyndall and others, attend the meetings. A bulletin is published whenever the matter on hand seems to warrant it, and a perusal of its pages shows considerable matter of interest and importance to the medical man. Thus the members are kept well posted on the latest advances in physics, natural history, chemistry, astronomy, etc., and in the use of scientific instruments, which are so constantly undergoing modification and improvement. Professor Henry's experiments in acoustics have proved very interesting as detailed by him, and many other such might be mentioned were it advisable. It must be confessed that many algebraic equations crop out here and there, as inevitable to applied science, which are very confusing to the average medical mind, since mathematics, by the labors of Helmholtz and a few others, is only of late asserting its practical value in medicine.

HOMO.

WASHINGTON, *July* 24, 1876.

THE AMERICAN MEDICAL ASSOCIATION.

LETTER FROM DR. BOWDITCH.

MESSRS. EDITORS, — Only yesterday did I have my attention drawn to the editorial of July 6th, upon the late meeting of the American Medical Association. My present relations to that association, and my desire that justice should be meted to it, and to its past and present officers, lead me to ask for an opportunity to make a few remarks upon your statements.

After the very generous defense of the permanent secretary made at the meeting by the chairman of the committee of arrangements, who took upon himself all blame for the choice of a hall, and so forth, it seems hardly right still to blame Dr. Atkinson, for they were really not wholly his fault.

Among the duties of permanent secretary is not that of making arrangements for meetings of the association. *The committee of arrangements takes those duties wholly under its own control.* I know this by personal experience, for when secretary, many years ago, I offered some suggestions to the chairman, the late Dr. Drake, of Cincinnati, and the only reply was that having been chosen king he was not going to be King Log. He plainly said that he preferred to go on in his own way, which I soon saw was for him and his colleagues the best they could follow.

The office of secretary is a thankless one. He is expected *to do everything as everybody wishes*, and it is very hard to perform the duties to the satisfaction of all. This I also know from a personal experience of two years as secretary.

In regard to the meetings and the interest displayed in them, and the address of the president, I am sorry to feel compelled to differ from your editorial. I do not mean to say that the meetings were all they should have been; far from it; but if some of your best men stay away, and only complain of the short-comings, what hope is there for the association? You should send your best representatives, and require of them some *work*, and then there would be no lack of interest.

Finally, I must dissent from the sectional and personal idea broached. Why in a medical journal pit South Carolina against Massachusetts? We should have no rivalry, save in emulation in good and efficient coöperation for the steady advancement of our profession; and as for bringing the president elect into comparison with his predecessor, it seems to me ungracious, as it is certainly unpleasant to myself personally.

With reference to the annual address by Dr. Sims I must also differ from you. Perhaps I should not have chosen the subject of syphilis for a public address; and yet no subject is more worthy of the most serious consideration of our whole people, not only by the profession but by the laity. I may not agree with Dr. Sims's method of dealing with our danger, but I fully agree with that distinguished surgeon and specialist, who justly has a world-wide fame, when he speaks of this great evil, and of its vital importance at the present day.

I trust you will pardon anything you may deem amiss in these suggestions. I feel that they are due to the association, to its secretary, to its late president, and to my own self-respect. Yours faithfully, HENRY I. BOWDITCH.

August 11, 1876.

BOOKS AND PAMPHLETS RECEIVED. — A Treatise on the Science and Practice of Midwifery. By W. S. Playfair, M. D., F. R. C. P. Philadelphia: Henry C. Lea., 1876. (From A. Williams & Co.)

Proceedings of the Connecticut Medical Society, 1876. Eighty-Fifth Annual Convention, held at New Haven, May 24th and 25th.

Series of American Clinical Lectures. The Modern Methods of Examining the Upper Air-Passages. By George M. Lefferts, M. D. New York: G. P. Putnam's Sons. 1876.

Thirty-Third Annual Report of the Managers of the State Lunatic Asylum at Utica, N. Y., for the Year 1875. Albany. 1876.

On Port-Wine Mark and its Obliteration without Scar. By Balmanno Squire, M. B., London, Surgeon to the British Hospital for Diseases of the Skin. London: J. and A. Churchill. 1876.

CORRECTION. — In the JOURNAL of August 3d, in noticing the death of Dr. A. S. Haskell, on page 145, in the first line of the notice, the initials of his son, Dr. W. A. Haskell, were substituted by mistake. Dr. W. A. Haskell is in the full tide of successful practice at Alton, Illinois.

DIED. — In Truro, August 9th, of typhoid fever, Anna L. Hughes, wife of Dr. Erastus Emery, aged twenty years and ten months.

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RADCLIFFE INFIRMARY UNIVERSITY 14 SEP 76 MUSEUM

A CASE OF UTERINE LYMPHANGITIS AND PERIMETRITIS.

BY G. H. LYMAN, M. D.

Mrs., —— age thirty-five; fourth pregnancy; has two living healthy children, one eight, the other four years of age. The third pregnancy, two years since, terminated at the full period in the birth of a hydrocephalic, still-born child.

I was called to this patient at half past seven o'clock P. M., Monday, May 22d. She supposed herself to be three weeks beyond her time. Labor pains had commenced two hours previously. On examination the os was found soft, and well dilated, the head presenting, with the parietal bones loose and overlapping an inch. There was no amniotic pouch. The patient was nervous, restless, and in more or less constant pain during the intervals of the uterine contractions. She informed me that all motion had ceased from the previous Wednesday, and that for the past three days she had suffered from pain in the hips, back, and posterior aspect of the thighs, especially on the right side. The labor progressed otherwise naturally, and at nine P. M. was completed. The child, a female, was of full size and evidently had been dead for some days, the palms being macerated and corrugated, but the cuticle still firm. The cranial bones were loose in the scalp like broken ice in a bladder, the hydrocephalic fluid having been absorbed or having escaped in some way.

The uterus contracted sluggishly. The placenta was removed from the cervical grasp with little difficulty, by the fingers aided by suprapubic pressure. Its removal was followed by a large amount of water ejected forcibly to the foot of the bed. Pains, supposed to be due to uterine contraction, continued and caused much complaint. The patient was somewhat excited and grieved at the birth of another hydrocephalic child.

May 23d (Tuesday). A very restless, sleepless night, notwithstanding opiates. The patient complained much of rheumatic pains through the hips and groins, resembling, neither in seat nor in character, after pains. Uterus about normal in size; lochia natural, though not abundant. No tenderness on pressure in the uterine region; renal

secretion free, relieved by catheter; neither nausea, headache, nor chill; temperature 100.5°; pulse not recorded. In the evening, temperature 102°; pulse 120; complains only of pains in hips, preventing sleep; gruel and drinks relished.

May 24th (Wednesday). Full opiate gave but two hours of unrefreshing sleep. Pains undiminished. Urine freely secreted, and removed by catheter; lochia natural; a slight feeling of coolness, readily relieved by extra blanket. No tenderness on pressure; very thirsty, with hot and dry skin. Constant desire to change position from one side to the other, to relieve the pressure on the hip. This movement is becoming difficult and painful. Evening temperature 103.5°; pulse 120; some incoherency of speech.

May 25th (Thursday). Salycilic acid was tried for twelve hours, but as it caused deafness and gastric uneasiness, it was discontinued.

May 26th (Friday). Symptoms steadily increasing in gravity. No relief from fomentations, nor from opiates internally or by subcutaneous injection, beyond a few minutes at a time. Urine continues abundant and pale, and the vesical contraction excites no pain. Lochia a little paler but still abundant and inoffensive. Abdomen flaccid; relishes brandy in small quantities, beef-tea, and gruel. Thirst constant. No tendency to headache, nausea, or chill. Talks constantly and incoherently, but answers when spoken to, with intelligence, describing accurately and clearly the seat and character of the pain, dwelling especially upon its locality in the right hip, thigh, and Poupart's ligament, and now, for the first time, in the corresponding knee. Has slept but a few moments at a time since Tuesday night. Temperature 104.5°; pulse 130.

May 27th (Saturday). Continued muttering delirium, skin hot and dry, tongue parched, thirst urgent. When aroused, recognizes every one and answers intelligently. Bladder relieved for first time by her own efforts. Locality of pain unchanged, but, except in right knee, it is less severe, unless she is moved. Seen by Dr. Storer at eleven P. M. Opiates continued.

May 28th (Sunday). No mitigation of symptoms and no continuous sleep induced. Thirty grains of chloral were given, and repeated in half an hour. This quieted and soothed the restlessness for an hour or two, but induced no continuous, sound sleep.

Five o'clock P. M. As the chloral irritated the throat, it was continued by enemata, the first of which induced a fœtid fæcal evacuation. Temperature 105.2°. Seen again by Dr. Storer at seven P. M. At eight o'clock ten grains of quinine were given, and repeated at nine. At ten, found her in profuse perspiration, with skin much cooler; pulse 110; temperature 104.5°; constant muttering. At midnight the pulse, which had heretofore remained of good volume, became

ided symptoms of collapse were manifested. On the
wever, she rallied for several hours and had three
nsiderable flatus. Gradually sank during the
ven P. M., one week from delivery.
t the autopsy, made by Dr. Fitz fifteen hours
ws: "Rigor mortis present. Abdomen only
urface smooth and shining, without injection.
le red, transparent fluid in the dependent portions
ie essentially to post-mortem conditions. The pelvic
by the contracted uterus, of which the peritoneal sur-
presented no unusual appearance beyond a few small
es. Douglas's fossa appeared normal. On removal of the
d its appendages, a slight sero-purulent infiltration of the
oad ligament was observed, and a defined, linear, somewhat
ed collection of pus, extending outwards from the uterus, in both
ad ligaments, just below the Fallopian tubes. The pus was partly
contained in canals with smooth, shining walls, evidently lymph vessels.
Within the uterine wall, near the entrance of the Fallopian tubes, a
few minute collections of pus were observed, giving no evidence of
their origin from thrombi. The inner surface of the uterus was some-
what discolored, opaque, rather dry, and smooth, except at the placen-
tal portion, which was near the fundus and did not appear abnormal.
Cervix and os externum showed nothing unusual. Vagina reddened,
surface slightly granular, not abnormal. Liver and kidneys pale, the
latter slightly opaque from cloudy swelling; the epithelium unusually
granular under the microscope. Spleen considerably enlarged and
softened, of pale pinkish color, the follicles indistinct. The stomach
had undergone post-mortem softening. The small intestines contained
liquid contents.

"*Diagnosis.* — Uterine lymphangitis and perimetritis. Acute splenic tumor and cloudy swelling of the kidneys."

This case is reported somewhat in detail, more on account of its interest from a diagnostic point of view than from its being especially remarkable as a result of parturition. Five days before labor commenced, the fœtal movements, which previously had been vigorous, suddenly ceased. Nearly coincident with this, the patient began to suffer more or less pain of the same character, though much less in degree, and in the same localities, as complained of during her subsequent illness. So far as can be ascertained, she had not been exposed to any contagious influence from her attendants or others. Whether the death of the fœtus was cause or effect, or what was the origin of the septic infection, is of course problematical. The lochia remained natural and inoffensive throughout. There was never any rigor, headache, or nausea. There was no tympany, the abdomen remaining flaccid and free from tender-

ness. A little obscure pain could be excited by deep pressure in the supra-pubic region, but not more than in any normal case. The renal secretion was abundant, and the vesical contraction excited no pain or uneasiness indicative of peritonitis. The condition of the pulse and the temperature of course excited suspicions of mischief in the uterus or its appendages, but there was at no time any other symptom which would justify a more absolute diagnosis. In any but a puerperal or surgical patient the symptoms would have been thought not unlike acute arthritis of the hip and knee joints. If these parts had been examined, probably pus would have been found there also to account for the pain. The constant nervous excitement, combined with certain domestic circumstances which it has not been thought necessary to allude to, suggested for a moment the idea of puerperal mania, but the delirium was not of the violent character usually attendant upon that disease.

Considering all these circumstances, the treatment was limited to opiates and fomentations chiefly, with such an amount of stimulus as she could bear or as her condition required from time to time. The treatment followed would seem to be justified by the revelations of the post-mortem examination.

EXTIRPATION OF THE UTERUS IN CONNECTION WITH OVARIOTOMY, FOLLOWED BY RECOVERY.

BY GILMAN KIMBALL, M. D., LOWELL, MASS.

Mrs. S., of Lancaster, N. H., forty-eight years old, having one child, now eighteen years of age, was operated on eleven years ago for ovarian tumor, chiefly cystiform, weighing thirty-three pounds. She made a good recovery, and continued in good health for six years. About this time she noticed that her abdomen was again becoming unusually large. She suffered very little, but was anxious lest another tumor should be forming, similar to the one removed years before.

In June, 1875, she was tapped, and forty-five pounds of brown, coffee-colored fluid were drawn off, followed by considerable prostration. The cyst refilled, and was again tapped in October following; prostration was more marked than at the previous operation. Again the cyst refilled, and more rapidly than ever.

The patient having now become satisfied that she was breaking down under the effects of her disease, and that tapping was affording only temporary relief, determined upon submitting to another operation. For this purpose I was called to operate the second time on November 9, 1875, and found the patient's general condition pretty fair. The abdomen was a good deal distended, but did not cause much distress. Disease, however, had made its impression on her. This was par-

ticularly shown by emaciation, loss of appetite, swollen feet, and a peculiar pallor of face, which denoted a deteriorated condition of the blood. The mental condition was excellent, calm, cheerful, and fully resigned to whatever might be the result of the expected operation.

Every needful preparation having been attended to, the operation was performed the following morning. Drs. Bugbee and Mitchell, of Lancaster, Dr. Gove, of Whitefield, and Dr. Adams, of Island Pond, were present and assisted. An opening through the parietes, in the line of the former incision, was followed by an escape of several ounces of ascitic fluid. A cyst was tapped by a large trocar, and twenty-seven pounds of chocolate-colored fluid were drawn away through a canula, to which a rubber tube had been attached. The opening was enlarged and the cyst emptied. A semi-solid mass, composed chiefly of a large number of smaller cysts, was slowly drawn through the incision, care being taken all the while to keep the opening closed, as far as possible, against the ingress of atmospheric air.

In searching for a pedicle it was found that the disease had embraced, in the course of its development, not only the uterus, but the whole of the left broad ligament. A separation of the parts thus involved was found impossible. Consequently, in order to complete the operation, the extirpation of the entire uterus became an unavoidable necessity. A cluster of distended veins connected with the broad ligament was first secured and severed between two ligatures. The remaining tissues to be divided, being thus considerably diminished in bulk, and especially in width, were next embraced in a loop of stout annealed iron wire, drawn tight by means of an écraseur. To complete the operation it only remained to sever the connection between the uterus and vagina by two or three strokes of the knife. The point of division was about three fourths of an inch outside the iron ligature.

Before closing the wound it was found necessary to remove a considerable quantity of coagulated blood from the pelvic cavity. With some difficulty and delay a bleeding vessel was finally discovered, and secured with a carbolized ligature.

The pedicle, being too short to admit of a clamp, was drawn forward and secured between the lips of the incision. The surface of the stump was thoroughly seared by actual cautery, and the wound closed with four deep sutures, three above and one below the pedicle.

Details of this case subsequent to the operation furnish nothing of special interest. During the entire period of convalescence there were no unpleasant or threatening symptoms; in all respects they were such as might be expected in an ordinarily favorable case of ovariotomy. From first to last there were no signs of peritonitis or septicæmia.

Pathologically considered, this case is seen to differ essentially from the one recently reported by Dr. Presbrey, of Taunton. Although the

connection between the uterus and the cystic portion of the tumor was extremely intimate, even beyond the possibility of separation, it became evident, upon careful dissection, that the tissues thus united were not only different in appearance, but entirely distinct in structure. Moreover, the cluster of small cysts that constituted the lower portion of the tumor furnished ample proof that the disease was of ovarian origin. The uterus contained no traces of a fibroid element, but it was hypertrophied to about double its natural size.

A CASE OF SUN-STROKE.

BY L. F. C. GARVIN, M. D., LONSDALE, R. I.

THURSDAY, July 13th, was one of the most oppressive days during the recent hot weather, the thermometer in Rhode Island being observed to attain the height of 95° in the shade and 131° in the sun. In the forenoon of that day, Patrick Dillon, a native of Ireland, fifty-seven years old, and a laborer, while engaged in weeding parsnips felt an unusual degree of discomfort from the intense heat of the sun. In the afternoon, in a more elevated position, he was again employed in the garden, and with the aid of three other men took a large quantity of ice water.

About two o'clock a sensation of weakness, accompanied by a sudden cessation of sweating and by palpitation of the heart, caused him to seek the shade, and a few minutes later to go to his house, several rods distant. Not finding any one at home, he threw himself upon the floor of the west room, remaining there until half past six o'clock, when his children returned from work. Meanwhile, about four o'clock, a comrade who came in administered a glass of brandy "to start the sweat," but without avail. During all this time and until about nine in the evening the patient says that he remained perfectly conscious, and furthermore that the amount of spirits which he took was not sufficient to have any effect upon him.

At ten o'clock P. M., a less quantity of brandy having been given without benefit, owing to increasing stupor, medical assistance was called. I found him lying upon a bed in a small room just off the kitchen, where a fire was burning briskly, in a temperature which could not have been much less than 100°. Able to swallow though not to speak, when aroused, he lay breathing heavily but free from mucous râles; pulse 108, temperature 105.6°; skin dry, lips parched and bleeding at a slight touch, pupils moderately contracted.

Treatment was conducted as follows: after taking a dose of bromide of potassium with aconite, the patient, stripped entirely naked and laid upon a hair-cloth sofa in a cooler room, was constantly sponged and

fanned from head to foot. Under the rapid evaporation thus produced the heat of the surface so rapidly and sensibly lessened that half an hour after its commencement a thermometer in the axilla registered 103.4°, the pulse falling to 88 and becoming softer. Rousing himself at this time he sat up, giving an opportunity to bathe and fan the back. When the cooling process had been continued without intermission for a second half-hour, the temperature was down to 100° and the pulse to 72. A sheet was now thrown over him, cold water cloths applied to his head, a second dose of the bromide of potassium and aconite given, and perfect quiet recommended.

He says that consciousness returned at three A. M., no recollection being retained of my visit or of the treatment. At eight o'clock the next morning, July 14th, while he complained of a severe pain in the occiput together with a sense of general prostration, with a temperature below 100° and a pulse at 72, he was convalescent. On July 15th he was feeling well, though weak. Four days from the date of the attack he resumed work, and although exposed to the sun much of the time has experienced no ill effects.

The satisfactory result of this moderately severe sun-stroke affords an illustration of the advantage to be derived in such cases from a speedy reduction of the elevated temperature of the body.

RECENT PROGRESS IN PUBLIC HYGIENE.

BY F. W. DRAPER, M. D.

The Diffusion of Cholera. — The spread of Asiatic cholera is a subject which has perpetual interest for the student of epidemiology and of sanitary science. The various incursions of this dreaded disease have been carefully investigated and analyzed in times past, but none of the epidemics have received so much attention as the last two of the series, both occurring within the last fifteen years. The course of the epidemic of 1873 has been studied in our own country with particular care and thoroughness under the orders and auspices of the general government, and the results of this investigation have been embodied in a voluminous report full of interest.[1]

Coincidently with the above work, so well done by the medical staff of our army, the sanitary authorities of Great Britain turned their attention toward an examination of the two cholera epidemics of the last decade. The task was intrusted to Mr. Netten Radcliffe, and his comprehensive and altogether admirable analysis of the facts touching the dissemination of cholera since 1864 has recently been published

[1] The Cholera Epidemic of 1873 in the United States. Washington: Government Printing Office. 1875.

under the supervision of Mr. John Simon, the Medical Officer of the British Privy Council and Local Government Board.[1] The exceptional facilities placed at Mr. Radcliffe's disposal by his general government for the prosecution of his work gave him a great advantage in the compilation of material facts, and he has utilized his opportunity with manifest fidelity. As a fruit of his labor we have a complete chronological account of the far-reaching influence of the cholera during the last ten years. The report is essentially narrative in character, detailing facts and omitting the elaboration of theories. In one particular the author presents evidence which must greatly modify the generally accepted idea of the origin of the epidemic of 1866. It has been the belief of most epidemiologists that this was an independent invasion; that, starting from its home in Bengal, the infection began in 1865 a new tour of the world. Such was the belief of the Constantinople Sanitary Conference of 1866 and of the Vienna Conference of 1874. But Mr. Radcliffe shows that the disease did not start anew in 1865, inasmuch as in 1864 it was already present in the southern provinces of Arabia, whence it easily crossed to Egypt, and so onward to be disseminated in Europe.

Mr. Simon, in his admirable introductory comments on Mr. Radcliffe's report, takes broad views of the diffusion of cholera. He says that all the facts point to a single conclusion as to the spread of the disease, namely, that human intercourse is the single active factor in diffusing the infection. "Detailed observation of particular outbreaks of cholera and suggestions of analogy and experiment have long led European pathologists to believe that the disease possesses great, though peculiar, power of spreading from the sick to the healthy; and Mr. Radcliffe in his very wide epidemiological study finds no reason to impute to cholera (outside the limits of India) any other mode of origination and extension than such as that doctrine expresses."

If, then, human contagion is the one active power in the international spread of cholera, is it possible, Mr. Simon asks, so to restrict the intercourse between infected and non-infected countries as to prevent the spread of the contagion? In the light of the facts gathered by Mr. Radcliffe, Mr. Simon feels constrained to reiterate the views upon quarantine expressed in his eighth annual report to the Privy Council: that quarantine of a sort to be trusted in as a national defense is not conceivable, except in proportion as a people lives apart from the great highways of commerce, or is ready and able to treat its commerce as a subordinate political interest; that though undoubtedly quarantine,

[1] Reports of the Medical Officer of the Privy Council and Local Government Board. New Series, No. V. Papers concerning the European relations of Asiatic Cholera, submitted to the Local Government Board in Supplement to the Annual Report of the present year [1875]. London. 1875.

planned with the precision of a scientific experiment and conducted with extreme rigor, may keep cholera out of places (such as remote and secluded islands) where the extremely difficult conditions can be completely fulfilled, yet, under other circumstances, quarantine cannot reasonably be expected so to succeed, and must then be regarded as a mere irrational derangement of commerce. Seeing that cholera is diffused in all directions by means of constantly-moving streams of religious pilgrimage and commercial enterprise, the first condition of treating a contagion so distributed would be to "immobilize" at discretion the great tides of human intercourse — a manifestly impossible project.

But Mr. Simon does not admit that quarantine exhausts the category of agencies for the prevention of cholera. He says, "If the constantly-developing and constantly-accelerating commerce between India and the rest of the world is not to carry with it a constantly increasing terror of pestilence, the safeguards, I apprehend, will consist, not in contrivances of the nature of quarantine to maintain from time to time more or less seclusion of nation from nation, but rather in such progressive sanitary improvements on both sides as will reduce to a minimum on the one side the conditions which originate the infection, and on the other side the conditions which extend it. . . . .

"That cholera, when imported into a locality, will under certain circumstances spread from the sick as from a centre, is among the certainties of medicine; but we know with at least equal certainty that its means of thus spreading are strictly limited, and the limiting conditions which are best known to us in regard of it are those which bring it into intimate analogy with our own enteric fever, and justify us in classing it as a filth-disease. . . . . It cannot, I think, reasonably be doubted but that, as conditions of filth, and especially as filthy conditions of water-supply, are the main facilitating conditions for the dissemination of cholera in Europe, so they must be immensely potent influences in favoring the advance of cholera from station to station in successive epidemic outbreaks in the countries which lie between India and Europe; and it would seem certain that, along the whole succession of lands which transmit the streams of westward traffic from India, common hygienic vigilance in respect of those conditions may be of very great effect in impeding the diffusion of cholera."

It is noteworthy that at the International Congress held at Brussels in the autumn of 1875 propositions respecting the diffusion and prophylaxis of cholera were adopted which correspond quite fully with the views above set forth by Mr. Simon. Among the conclusions reached by the congress were the following:[1] "The first indication is to destroy the original foci of the cholera in India and its secondary foci in Europe by sanitary works. The second maxim is to prevent the transport of

[1] The Sanitary Record, November 13, 1875.

the morbid principle into healthy countries by all really efficacious plans of isolation compatible with the exigencies of modern civilization. The third prophylactic rule is to neutralize this morbid principle by methods of disinfection still to be determined. The fourth precept consists in diminishing the ravages of cholera by well-considered hygienic measures." It will be observed that the word "quarantine" does not enter into these formulated conclusions, the expression "plans of isolation" being substituted.

The Effect of Migration upon Death-Rates. — The value of the death-rate as an indication of sanitary condition has been seriously questioned in recent times, but not fully disproved. It has been asserted that various disturbing conditions are constantly in operation to vitiate the assumed reliability of this test as ordinarily determined, that is, the proportion of deaths to population. Among the grounds which have been urged by Rumsey, Letheby, Child, and others against accepting general death-rates as indices of relative salubrity of location and activity of sanitary administration is the effect of migration. It is pointed out that the deaths registered in towns almost always include a considerable number which have occurred in public institutions, such as hospitals; many of these decedents were non-residents. On the other hand, it is equally true that the deaths of many persons who are reckoned as residents of cities and are included in the living population of those cities, occur in the country, to which domestic servants, clerks, shop-girls, and others often retire when they become ill, going to their former homes. It has actually been determined by Mr. Welton[1] that the death-rate of males between the ages of ten years and twenty-five and of females between ten and thirty-five, living in towns, is almost invariably lower than the death-rate among those of the same age living in the country. This fact is the more interesting because the general death-rates at all ages and at each of the other groups of ages in the great majority of cases are in excess in cities and centres of population. Mr. Welton calls particular attention to the fact that the fatality of phthisis at the ages above mentioned, in the country about London, is nearly double that which obtains in London, although, at all ages, the mortality from this disease is greater in the urban than in the rural population.

Mr. Humphreys ingeniously exposes the fallacies to which these observations might lead one, and shows that, in fact, migration scarcely influences the value of general death-rates at all ages. Assuming, he says,[2] for the sake of argument, that the death-rate in cities at these ages, ten to thirty-five, ought to show the same proportional excess as is shown at other ages, and adding to the deaths registered in such cities at these ages a sufficient number to raise the rate to the requisite degree,

[1] The Sanitary Record, December 18, 1875.

[2] The Sanitary Record, December 18, 1875.

the extreme effect upon the rate at all ages will be found to be very small. Thus, he found that the extreme understatement of the London annual death-rate in the ten years, 1861–70, due to this alleged disturbing influence of migration, amounted to 0.44 per 1000, a variation too small to disqualify the general death-rate as a test of sanitary condition.

Disinfection and Disinfectants. — The use of disinfectants has rested hitherto on such an uncertain and unscientific basis, and has been so empirical and altogether unsatisfactory, that any original investigations extending our knowledge of the agents which play so important a part in sanitary work ought to be recognized as real advances in public hygiene. It is quite time that we were outgrowing our faith in the too commonly "futile ceremony of vague chemical libations or powderings," as it is usually practiced under the name of disinfection. As Mr. Simon points out, it is in relation to individual cases of infectious disease, and in endeavors to secure in detail (so far as possible) the immediate neutralization of the infectious matters which come from the sick, that chemistry has its chief opportunities for subserving preventive medicine; but in any such endeavors for disinfection everything must turn on the accuracy and completeness with which each prescribed performance is done, and it is evident, therefore, that prescriptions for disinfection ought to have the same sort of exactness as prescriptions which are for therapeutical purposes.

Dr. Baxter contributes to the latest of Mr. Simon's invaluable reports a paper giving the results of his experiments touching the disinfectant power of certain agents.[1] For the purposes of his investigations Dr. Baxter has limited the definition of a disinfectant as follows: "any agent capable of so modifying the contagium of a communicable disease, during its transit from a sick to a healthy individual, as to deprive it of its specific power of infecting the latter." This definition at once restricts the problem within clear limits, and does away with much of the vagueness which has hitherto attached to it. If a reputed disinfectant be allowed to act upon any material which is known to have the power of communicating specific disease, and the material thus acted upon be subsequently inoculated, the positive or negative results of such inoculation must needs furnish a reliable test of the ability of the disinfectant to fulfill the duty laid upon it.

Without committing himself as in favor of any single one of the numerous theories of contagion, the author describes the essential characters which, in his opinion, belong to the contagium or virus of a communicable disease. The two features which especially characterize virus are its capability of undergoing almost unlimited multiplication

[1] Reports of the Medical Office of the [British] Privy Council and Local Government Board. New Series, No. VI. London. 1875.

when introduced into an appropriate medium, and, secondly, its particulate nature and, in consequence of this, its unequal distribution. It follows from these qualities that dilution of virus simply lessens the chances of infection without destroying its specific characters when it does occur, so that nothing short of the complete destruction of all the contagia in the infectious medium can guarantee against the indefinite propagation of the virus.

The four agents which Dr. Baxter selected for their commonly supposed disinfectant virtues were potassic permanganate, sulphur dioxide, chlorine, and carbolic acid; and with these he experimented upon vaccine virus, the virus of infective inflammation in guinea-pigs, and the virus of glanders.

Experiments were made with dry and with liquid vaccine. The experiments with the latter were conducted as follows: "Four capillary tubes having been charged from one vaccinifer, the contents of two of these were diluted with an equal volume of half per cent. saline solution; the lymph contained in the other two was mixed with an equal volume of disinfectant solution of known strength. The diluted and the disinfected liquids were sealed up in separate tubes, and employed for vaccinating a healthy infant, the former being inoculated in three places on the left arm, while the latter was introduced into an equal number of places on the right arm, two lancets being employed for the purpose. The inoculation was performed by scratching, not by puncture. The results were recorded on the eighth day." The experiments with potassic permanganate gave results midway between the exaggerated value ascribed to permanganate by some and the total repudiation of its claims by others. It was found that a one-half per cent. proportion of the disinfectant destroyed the infective energy of the vaccine virus. In the experiments with chlorine it appeared that unless that agent were added in sufficient quantity to make the lymph acid (.1633 per cent.) it had no appreciable effect on the infective power. One per cent. or less of carbolic acid exerted no influence on the activity of liquid lymph; with between one and two per cent. of the acid the effects of inoculation were irregular; two per cent. seemed sufficient to destroy the infective activity.

In the experiments with dry vaccine the very marked superiority of sulphur dioxide to carbolic vapor and chlorine gas was demonstrated. The author remarks, "It is sufficiently obvious [from experiments detailed] that the quantity of chlorine given off into a room from a basin filled with chloride of lime, or the vapor of carbolic acid generated in a vaporizer, would be utterly inadequate to destroy vaccine virus, and, by inference, the contagium of small-pox, when imbedded in a matrix of dried albuminous matter; and it is not unlikely that the virulent matters for whose destruction aerial disinfection is employed are commonly protected in some such way."

The infectious matter of inflammation was derived from the peritoneal cavity of guinea-pigs which had succumbed to infective peritonitis, and its effects before and after disinfection were studied in connection with its subcutaneous inoculation upon healthy guinea-pigs. It appeared, as the result of these experiments, that carbolic acid in the proportion of one per cent. or more, chlorine in that of .078 per cent. or more, sulphur dioxide in that of 2.9 per cent. or more, and permanganate in that of .05 per cent. or more, were capable of so modifying the virus as to deprive it of all infective power.

The virus of glanders was disinfected by the presence of two per cent. of carbolic acid, or .4 per cent of sulphur dioxide; .5 per cent. of carbolic acid did not impair its virulence in the least.

Finally, Dr. Baxter tested the disinfectant power of the four selected agents upon septic microzymes cultivated in an artificial fluid favorable to their reproduction (Cohn's solution). He found that the microzymes which swarm in this solution were completely deprived of reproductive power by potassic permanganate when present in the proportion of .007 per cent. or more; by chlorine when present in the proportion of .0008 or more; by sulphur dioxide when present in the proportion of .123 per cent. or more; by carbolic acid when present in the proportion of one per cent. or more. The apparent discrepancy between these results and those in connection with vaccine virus is accounted for, in the author's view, by the difference in the medium of the contagia in the two instances.

Dr. Baxter concludes his report with a series of propositions, among which are the following: —

"Evidence has been adduced to show that carbolic acid, sulphur dioxide, potassic permanganate, and chlorine are all endowed with true disinfectant properties, though in various degrees. . . . .

"When either of these agents [chlorine and potassic permanganate] is used to disinfect a virulent liquid containing much organic matter or any compounds capable of uniting with chlorine or of decomposing the permanganate, there is no security for the effectual fulfillment of disinfection short of the presence of free chlorine or undecomposed permanganate in the liquid after all chemical action has had time to subside.

"A virulent fluid cannot be regarded as certainly and completely disinfected by sulphur dioxide unless it is rendered permanently and strongly acid.

"No virulent fluid can be considered disinfected by carbolic acid unless it contain at least two per cent. of the pure acid by weight.

"Aerial disinfection, as commonly practiced in the sick-room, is either useless or positively objectionable, owing to the false sense of security it is calculated to produce. To make the air smell strongly of carbolic acid by scattering carbolic powder about the floor, or of chlorine, by

placing a tray of chloride of lime in a corner, is, so far as the destruction of specific contagia is concerned, an utterly futile proceeding.

"Whenever aerial disinfection is resorted to, ... chlorine and sulphur dioxide are suitable agents for the purpose; the latter seems decidedly the more effectual of the two. The use of carbolic vapor should be abandoned, owing to the relative feebleness and uncertainty of its action. . . . . The space to be disinfected should be kept saturated with the gas [chlorine or sulphur dioxide] not less than an hour.

"Dry heat, when it can be applied, is probably the most efficient of all disinfectants; but we must be sure that the desired temperature is actually reached by every particle of matter in the heated space."

SAYRE ON ORTHOPÆDIC SURGERY.[1]

We have read with great pleasure Dr. Sayre's new volume, and we sincerely congratulate the members of our profession upon a valuable addition to the limited bibliography of this special department of surgery. A pleasant, colloquial tone renders it more attractive reading than any set treatise, and the fascinating way in which Dr. Sayre relates the progress of his patients from extreme disease and deformity to almost perfect health and symmetry rivals the art of the novelist. The volume is divided into short chapters, lectures, the space devoted to the principal diseases being fairly proportioned to the frequency and importance of each, although we notice that of ten pages upon the ætiology of deformities, seven are devoted to Phymosis and Adherent Prepuce, while only three are given to all other causes.

Coming at once to talipes, the first of the deformities considered at length, the author demonstrates clearly the seat of its various forms, with its anatomy. But when he says, "The seat of talipes has always till recently been supposed to be at the ankle-joint," we must refer him to Dr. Bigelow's work, published thirty-one years ago, to Mr. Little's, thirty-seven years ago, and even to Scarpa's, published in 1803, seventy-three years ago, in each of which he might have found an extended description of the anatomical condition, which he so concisely states.

We would commend most heartily Dr. Sayre's rules for determining the propriety of tenotomy. We have always believed that much harm is occasionally done by the performance of this operation in unsuitable cases. Such misfortune will not befall the patient of any surgeon who follows the rules here laid down.

The author's belief in the paralytic origin of a majority of cases of talipes expresses the views of most surgeons who have lately paid attention to the question.

Dr. Sayre recognizes the importance of imitating the natural forces in the

[1] *Lectures on Orthopædic Surgery and Diseases of the Joints.* By Louis A. Sayre, M. D. Illustrated. New York: D. Appleton & Co.

reduction of deformities. He lays great stress upon the value of elastic tension, and gives due credit to Mr. Barwell for his ingenious application of India rubber to supplement the various paralyzed muscles. The mechanical appliances advised for the treatment of talipes consist essentially of a Scarpa's shoe, combined with Barwell's elastic tension, applied, as the celebrated painter mixed his colors, "with brains." The application and adjustment of apparatus cannot be left to anatomically uneducated persons. Intelligent persistence is the *sine qua non* of all success in orthopædic surgery.

Dr. Sayre states as an original observation that there is no lateral motion at the astragalo-tibial articulation. Undoubtedly there is but little in the normal movements of the joint, but the question is whether there may or may not be malposition of the astragalus in talipes. Many authors admit that usually there is little or no luxation of this bone, but all agree, and it has been demonstrated by dissections, that, in extreme deformity, there may be a rotation of the bone upon its axis, and great alteration of its shape and position between the malleoli. Scarpa demonstrated the fact that in varus "of the entire tarsal bones, the astragalus suffered the smallest degree of displacement."

Dr. Sayre says further that "turning the toes in or out is produced by rotation of the thigh and leg at the hip-joint, or by the revolving motion of the fibula, produced by the contraction of the biceps and tensor vaginæ femoris when the knee is flexed." Of the inaccuracy of this statement any one can satisfy himself by a few careful experiments upon his own person. Considerable inversion and eversion of the toes can be produced by the action of the muscles of the leg, and Dr. Sayre incidentally admits, in the foot-note, that the requisite motion is permitted at other than the astragalo-tibial articulation.

In considering disease of the ankle-joint the author states clearly and concisely the facts which give the indications for correct treatment of all joints. It is generally admitted that extension and rest are the objects aimed at by all apparatus designed for the treatment of joint diseases. The author describes very fully the apparatus he uses to procure extension for the ankle-joint. It seems entirely adequate for the purpose. But nothwithstanding his enthusiastic advocacy of the remainder of his method of treatment, we believe that most conservative surgeons, while perhaps using his apparatus for extension, will seek other methods of obtaining rest than by allowing their patients to walk about with a seton directly through the ankle-joint.

Of the many forms of the disease known as "white swelling of the knee," Dr. Sayre traces the history and treatment as it is understood by modern practitioners. Of the pathology we shall have more to say in connection with the hip-joint, for Dr. Sayre expresses his ability to "prove that the scrofulous diathesis is simply an accidental accompaniment, and has no more to do with the development of the local disease within the joint than does the hæmorrhagic diathesis," etc.

His idea of treatment is that just described for the ankle-joint: extension and rest. His apparatus seems well adapted for the purpose when the knee is straight or nearly straight, but he admits that it cannot be used when there is much flexion of the joint. This condition of flexion is usually found, and

under such circumstances he advises the use of weight and pulley. Flexion is nature's effort at separation of the inflamed surfaces. Extension by weight and pulley presses these surfaces together again, aggravating the inflammation and consequent pain.

We venture to say that Dr. Sayre has been more fortunate than most surgeons if he has been able to "extend" a flexed, acutely inflamed knee by the weight and pulley process figured in the book.

In considering the ætiology of hip-joint disease Dr. Sayre begins with the following remark: "Almost all surgical authorities agree that morbus coxarius is invariably the result of a contaminated constitution; in other words, that it is essentially of strumous origin. This . . . . doctrine is still extant among a majority of surgical practitioners." The accuracy of the statements depends entirely upon the authors whom he would quote as "surgical authorities." If he refers to works published forty or even twenty years ago, he is probably correct. But many writers of more recent date take the safer middle ground.

Dr. F. H. Hamilton, in his Principles and Practice of Surgery, pages 434 and 435, expresses the views which we believe are now adopted by the majority of intelligent observers. Dr. Hamilton's concise statement is this: "It [hip disease] is essentially the same malady as that which, having attacked the lower epiphysis of the femur, or the upper epiphysis of the tibia, is known as white swelling." Then, after mentioning the various interpretations of the morbid changes, he says, "But later pathologists recognize in them nothing more nor less than the infiltrations and degenerations of tissue consequent upon chronic inflammation, and in their nosology 'white swelling' is circumscribed osteo-myelitis or ostitis, liable to be followed by solidification, expansion, suppuration, necrosis from strangulation, and caries.

"To this latter theory I do not hesitate to declare my adhesion. *Nevertheless there can be no doubt that a strumous or tuberculous diathesis constitutes an active predisposing cause in a large proportion of cases,* — a doctrine which is in no way inconsistent with the fact that, in most examples, the development of the malady may be distinctly traced to some apparently insignificant local injury."

Dr. Sayre expresses his firm belief that the disease is one almost invariably due to a traumatic cause alone, and that it is not dependent upon constitutional taint. He brings his own statistics to confirm his view, but on careful analysis it is evident that they only confirm the previously well-established fact that, while all children are liable to the disease, the so-called scrofulous children are particularly liable, or, in other words, that of all the scrofulous children living, a much larger percentage have the disease than of the healthy children. Dr. Sayre's description of the symptoms of the first stage of hip disease is so clear and well stated that we wish it might be copied into the hand-books of surgery. It would render certain the halting diagnosis of many a surgeon, and thus bring the case to treatment in time to effect a perfect cure. The idea of treating hip-joint disease by rest is as old as the art of surgery itself, and the best means of obtaining it have always been sought. Nor is the idea of extension a very recent one, but it has latterly come to be

understood that repair of the joints is dependent in a great measure upon the health — and therefore exercise — of the body; so that the patient is not to be confined as formerly to bed, but is to be furnished with such mechanical aid as will prevent motion of the joint, and slightly separate its inflamed surfaces, while the remainder of the body has exercise. As to the apparatus by which this result is effected at the hip-joint, we are compelled to believe that little or nothing has been added by Dr. Sayre to the original apparatus of Dr. H. G. Davis, and of Dr. C. F. Taylor. To these gentlemen great credit is due. The apparatus of Dr. Davis first introduced the metallic rod or splint capable of elongation by rack and pinion, or by other device. To the top of this splint was attached a single perineal strap supporting the weight of the body; while to the lower extremity was attached the adhesive plaster by which the limb was to be extended. Dr. Taylor added to the above a metallic girdle jointed to the top of the rod, and passing more or less nearly around the pelvis. To this pelvic band or girdle a second perineal strap was attached; and the joint beween this girdle and the rod also received from Dr. Taylor an important modification. The original ball-and-socket joint proved to be not much better than the catgut first employed. It allowed too much motion.

Dr. Taylor substituted a joint admitting only flexion and extension, the rod-splint being jointed like a door-button to the side of the girdle. A hinge and set-screw to abduct the limb, in the few cases where it is desirable, were devised by Dr. Taylor. In Taylor's apparatus, also, extension is made by adhesive straps, from the whole limb, the patient walking on the end of the splint. If this statement be correct, it leaves little of originality to Dr. Sayre. The short splint upon which he formerly insisted has, we believe, not been found efficient in other hands than his. The long splint identical with the one figured and recommended by him on page 269 was figured and described by Dr. Taylor in the *New York Medical Record* for September 1, 1867; he having used it for several years before, and having exhibited it in the *Exposition Universelle* at Paris. The only real modification of Taylor's apparatus suggested here is that embodied in the proposal by Dr. Sayre to substitute for the fixed strap of Taylor an elastic strap at the hip-joint, "allowing flexion when the patient wishes to sit down." This would allow motion at the hip-joint — the very thing which, in the acute inflammatory condition of the joint, is acknowledged to be harmful, and to prevent which is the whole object of the apparatus. It would seem evident, therefore, that the apparatus without this modification effects the desired extension and rest more completely than any yet devised.

Had Dr. Sayre been writing instead of lecturing extemporaneously, he would undoubtedly have looked in Dr. Taylor's monograph for his description of the different appliance used in cases or stages of the disease where motion of the joint is desirable.

Dr. Sayre finds cause for surprise in the absence of dislocation noticed by Dr. Alden March and himself in hip disease. As the shortening of the limb and its inversion are both identical with the symptoms indicating the traumatic lesion, and as this attitude of the limb has been gradually acquired while the head of the femur was resting upon the posterior part of the socket, it seems

rather a confusion of ideas to refuse the name of dislocation to the lesion because the head of the bone has gradually disappeared by caries. The capsule has been ruptured by ulceration, the anterior and stronger part of the capsule — Dr. Bigelow's Y ligament — remains, and the condition of the parts is really that of luxation upon the dorsum, with caries and atrophy of the head of the femur. This view, in fact, is the only one which leads to a proper appreciation of the resultant deformity and its treatment.

In giving a history of the operation of exsection of the hip-joint, Dr. Sayre makes this statement: "*In this country* the operation attracted but little attention until I published my first case in the *New York Journal of Medicine* for January, 1855. That was the first time the operation had been successful *in this country*. Dr. Bigelow, of Boston, had performed the operation about a year before, but had not published the case." While we are not of those who attach great importance to the repetition of an old operation in a new place, we regret to believe that Dr. Sayre has been negligent in looking up the facts. He will find reported in the *American Journal of Medical Sciences* for July, 1852, page 90, Dr. Bigelow's case of resection of the head of the femur, performed and published more than two years before that of Dr. Sayre. If this escaped his notice, though in one of the most prominent of American medical journals, we must also express our surprise that he should overlook the reference to this publication of Dr. Bigelow's case in the standard existing work on Excision of the Joints, which, by the way, is an American work by Dr. R. M. Hodges.

The table of exsections of the hip-joint performed by Dr. Sayre is justly liable to the same criticism which was made upon the table formerly compiled by him. Of that it was said, "A certain amount of reserve is necessary in receiving the results of this table, as some inaccuracies have unfortunately crept into its compilation. It is to be regretted that Dr. Sayre has not furnished his excellent article with a more elaborate analysis of the cases which accompany it." How applicable that criticism is to the present table may be judged from a statement of a few facts gathered from it. Nine cases are included in the table, although still under treatment; and some had been operated upon within four months of the publication of the table. Dr. Sayre also includes nine cases where the head of the bone was lying loose in the acetabulum, although he had previously acknowledged, on page 287, that such cases should not be called cases of exsection. Neither are they so included by other authorities. Dr. Hodges, in his work before referred to, makes a separate table of such cases, and says, "It seems proper to make a distinction between those cases where the head of the bone, already spontaneously separated, is removed, and those in which the separation is effected at the time of the operation. The former resemble operations for necrosis. The separation of the bone is itself an effort on the part of nature in a curative direction; and the considerable success which might perhaps be anticipated attending its removal is sufficiently well shown in the table." The force of this distinction is well exemplified by the nine cases which Dr. Sayre has included in his table. Of the nine, only one died, six recovered, and two are still under treatment, — certainly a very different ratio of recoveries from

that obtained in true exsection. In one case (No. 13) the rather inexplicable fact is stated that "this case also fractured at the epiphysis above the knee, in attempting to luxate the head from the acetabulum." It had been previously stated of the case that the neck was absorbed, and that the head was lying loose in the acetabulum.

Under the head of results, Dr. Sayre occasionally mentions the fact that "wounds entirely closed." Are we to infer that, in the remaining cases, by far the largest part, the wounds are not yet closed?

Of some cases the only report is, "Recovered with good motion." From such brief statement we can infer only that the patient is living, and we are unable to judge whether the limb was useful or useless. Mr. T. Holmes says that good motion is the rule, and not the exception, in all cases of recovery. Anchylosis is rare, as might be expected in view of the fact that much bone is removed in the operation. There may be good motion of the limb, and yet the patient may not be able to bear weight upon it.

Statistical tables are of value only as their basis of classification corresponds with that ordinarily adopted by other surgeons. The evident inaccuracies and deficiencies of this table go far to impair the value of the results claimed, and are more noticeable because the subject is one in which Dr. Sayre assumes, in some measure, to be a pioneer and an authority.

Dr. Sayre begins his consideration of Pott's disease by a repetition of his belief in its traumatic origin, as previously expressed concerning other joints. Admitting its probability, we can apply to this theory the remarks made concerning hip disease and the important rôle played by the strumous diathesis in its development. Again, we may commend Dr. Sayre's admirable description of the diagnostic signs of hip disease in its early stages, and especially the prominence he gives to that fact that pressure upon the spinous processes *does not* ordinarily produce pain. Most heartily do we concur in his statement that the true principle of treatment is not longitudinal extension of the spine, for which purpose so many instruments are constructed, but that it is antero-posterior pressure, by which the superincumbent weight is transferred from the diseased bodies of the vertebræ to their healthy articular processes. He recommends and gives a very fair wood-cut of Dr. Taylor's apparatus for this purpose. He wholly ignores Dr. Taylor's ingenious contrivance for effecting the same result when the disease involves the cervical vertebræ. Instead of this he gives a figure of an apparatus constructed like a gallows, upon the very principle of extension which he has just condemned.

Dr. Sayre devotes considerable time to the description of the plaster of Paris dressing in Pott's disease. As we have never made use of it, we are not in a position to express an opinion as to its practical utility. The serious objections to its use will occur to every one. Dr. Sayre's enthusiastic indorsement of it will undoubtedly induce others to give it a trial, especially as it is so easy to apply. As yet, sufficient time has not elapsed to demonstrate its efficiency in the treatment of a disease which ordinarily requires months and even years for perfect cure. To the subject of anchylosis the author devotes much space. His method of treatment is that adopted by most surgeons: forcible breaking down of the adhesions, under ether, and subsequent passive

motion of the joint, upon the judicious application of which its future usefulness depends.

We regret exceedingly that this valuable work should be marred by violations of that unwritten code of ethics which is supposed to govern all the liberal professions, and more especially our own. Dr. Sayre deems it necessary for the vindication of his own skill to introduce into his volume the names of some reputable professional brethren, exhibiting their errors of diagnosis, which were immediately corrected when their patients came under his own care. Had these gentlemen been as ill-informed as would appear from the volume, Dr. Sayre would have displayed more of the attributes of a "Knight of the Order of Wasa," and would certainly have risen in the esteem of a majority of his brethren, by an exhibition of that "charity which vaunteth not itself, and is not puffed up."

The typography of the book is excellent, the errors here being few and unimportant. The wood-cuts are abundant, and in quality perhaps adequate to their purpose. In his preface Dr. Sayre disarms criticism by the frank avowal that this is only a stenographic report of extemporaneous lectures.

We wish the author might find time, amid the cares of his large practice, to revise this volume. There can be little doubt that a careful revision, in the light of the works of Scarpa, Little, and other more modern writers, would destroy many of his claims to originality, but it would in no wise impair the interest or value of the book. On the contrary, this would go far to make it what we hope soon to see — a standard work on orthopædic surgery.

G. G. T.

MATERIA MEDICA AND THERAPEUTICS.[1]

It is a surprise to find at this period in the advance of medical science a person endowed with sufficient intrepidity to announce that "those who look for results of experiments on mutilated animals, in the following pages, will not find them, for the editor is satisfied that this is not legitimate therapeutical inquiry." One is the more surprised to notice that this statement is preceded (on the page before) by an acknowledgment that the past eight years is a "period of unprecedented activity in all matters connected with materia medica and therapeutics, and one which is generally acknowledged to have been marked by a real advance of knowledge." It may be prejudice, but it is certainly one which is shared in by almost every modern student of the action of drugs, to believe that the many experiments on animals, some of which have indeed been "mutilated," as Dr. Harley rather sneeringly asserts, have contributed largely to the "real advance of knowledge." In fact, the editor of the very work in question would be puzzled to account for some of his own explanations of the action of drugs without an acquaintance with these data which he so violently repudiates; for instance (page 74), how does he know that the action of nitrous oxide is due to "stagnation of the capillary circulation, and as a consequence increased pressure in the arteries"? How

[1] *Royle's Manual of Materia Medica and Therapeutics, etc.* Sixth Edition. By John Harley, M. D. Lond., F. R. C. P., etc. Philadelphia: Lindsay and Blakiston. 1876.

could he determine that there was stagnation without the use of animals in experiments? Many of the experiments on unmutilated animals do most certainly contribute to our knowledge. More glaring evidence of the author's inconsistency is exhibited on page 103, where he says, concerning the action of hydrocyanic acid, "The primary action is undoubtedly on the cerebro-spinal nerves; for the acid exerts a paralyzing action on all nerves directly exposed to it. This is the key to its medicinal action," etc. In order to *expose a nerve* directly to hydrocyanic acid, an animal must be *mutilated*, to use the author's own words. We will not take up space in our columns to more fully elucidate the fact that Dr. Harley has probably availed himself, in drawing his own conclusions on the action of medicines, of the studies and observations of those who have experimented on animals, even though he positively states in his preface "that nothing short of a patient survey of the operation of a drug in the entire body in health, and under the variable influence of disease, can furnish the data upon which we may build a proper theory of its action." We claim all that Dr. Harley claims, and would correct the results of carefully conducted experiments on animals by observation at the bedside and by experiments on the body in health.

Again, we can scarcely agree with the statement (page 6) that the action of drugs is *only* fourfold: "first, to retard or accelerate osmose; second, to alter the condition of the blood; third, to increase or diminish those changes in the nerve-cells which result in the generation of nerve force; last, by virtue of similar influences to increase or diminish the conductility of the nerve fibres." Dr. Harley would seem to ignore many of the teachings of modern physiology, among these the variations of animal heat, of blood pressure, of muscular irritability, etc.

In its chemical details, the manual is far superior to other works on materia medica, and we are especially pleased that its pages are not surcharged with detailed botanical descriptions, which weary and confuse the medical student, and are of more consequence to the pharmacist than to the physician. However, there is given a sufficient amount of botanical data to enable the medical student to recognize the plants from which the drugs are derived, and to tell from whence these may come. Another convenience in the detail of the book is recognized in its furnishing the corresponding names in the French and German language, as well as the modern chemical names of the salts. The new chemical notation is conspicuous, and the text facilitates its comprehension to one who has been educated in the old style. The illustrations which are occasionally found in the book are poorly executed, but are as easily understood as the blackboard diagrams of many of our modern lecturers.

The present edition bears unmistakable evidence of being almost entirely rewritten, and, though its style is didactic and perhaps almost too positive for a young student, its language is well chosen and attractive; its conciseness of language enables the editor to collect a large amount of well-digested material into a moderate-sized manual.

Notwithstanding our criticisms, we do most heartily recommend this work to a perusal. The arrangement and sequence of the material which makes up the manual are eminently good. A.

THE INTERNATIONAL MEDICAL CONGRESS.

THE meeting which is to be held next week at Philadelphia is an event of no small importance to American physicians. On this occasion our countrymen will appear for the first time as a body prepared to compare the work which has been accomplished by them during our century of existence with that of other nations. There is no longer any doubt as to the international character of the meeting; the considerable number of European physicians already in this country, and the long list of distinguished names given by our correspondent are sufficient guarantees that the foreign element will be amply represented. Our guests will be present not only with a view to participate in the exercises, but also, and probably chiefly, for the purpose of estimating the standing and character of the profession in this country. The men whom we have selected to represent us will be subjected to comparison and criticism, and although this will doubtless be done in a most friendly spirit, it is highly desirable that we should do our utmost to make the meeting a success from a scientific as well as from a social point of view.

It is evident that very careful preparations have been made by the committee having in charge the work of the congress. One of the special features of the programme will be papers presented by the reporters on questions assigned for discussion in the sections. These reports, as is known, have been assigned to representative men selected from all parts of the country, and embrace almost every special field of medicine. A pamphlet has been recently issued giving an outline of these papers, so that any one who desires to may become familiar with the section work. Although no startling novelties are disclosed, we see evidences that the active participants in the congress have appreciated the peculiar advantages to be derived from such a meeting, and have accordingly so arranged their work as to bring out a critical comparison between contributions made by this and foreign countries to medical science. We have certainly just reason to be proud of the share which America has had in the advancement of the science and practice of medicine. It has been no insignificant one, and we have every reason to hope that our claims to be considered a first-class medical power, if we may use the term, will be conceded by our foreign visitors at the coming convention. The meetings of the ophthalmological congress and the new gynæcological society will be held in New York immediately after the close of the congress, and we understand that many valuable papers are to be read both by our leading specialists in these branches and by several distinguished visitors. We wish success to all these gatherings most heartily.

THE TREATMENT OF THE INSANE IN AMERICA.

DOUBTLESS many of our readers are aware that *The Lancet* has been engaged for several months past in criticising the treatment of the insane in the asylums of this country. The tone of many of the articles has been grossly abusive and unjust, and has called forth protests from some of those in En-

gland who desire that the question should be discussed in a candid way. In some remarks on the recent meeting of the British Medical Association, at Sheffield, *The British Medical Journal* of August 5, 1876, says, "An interesting incident was afforded by the brief statement which Dr. Bucknill interposed in the course of the second general meeting, in vindication of the character of the medical superintendents of lunatic asylums in America. They have been very foully aspersed lately by a medical paper in this country, which appears to think that 'sensation' is not bought too dearly even at the expense of professional honor, and which has sacrificed equity and fair dealing to the desire of making a horrid example of the American asylums; with this view, it has treated the wild aspersions of political scribes of an order of scurrility happily unknown in this country, as grave matters of proved fact, ignorant or careless of the recklessness with which, under the political system of America, professional proceedings and personal character are slandered for political purposes. It has accepted the 'secret reports' of political agitators as established judgments, and has vilified persons as guilty of horrible cruelties in the conduct of asylums, who are in fact quite innocent, and have been proved to be so. Dr. Bucknill, who has a full general knowledge of the conduct of the American asylums, took occasion to disclaim, on the part of the English profession, any complicity in this promulgation of scandals against our American brethren; and his declaration will be received with sympathy on this side of the Atlantic and with cordial satisfaction on the other." At the annual meeting of the Medico-Psychological Association, which was held at the London College of Physicians, July 28th, Dr. Bucknill took occasion to refer to the charges which had lately been made against the management of American insane asylums. "While he did not defend all American asylums or all medical officers, he asserted most strongly, from his personal observation, that a spirit of humanity prevailed in a large number of those institutions, and that, as a body, their medical superintendents were men of great ability, zeal, and kindness. The association then, on the motion of Dr. Bucknill, seconded by Dr. Clouston, passed a resolution of sympathy with their brethren engaged in the arduous and difficult duty of the treatment of the insane in America, who have been unjustly accused of inhumanity and ignorance." We copy this abstract from the proceedings from the *Medical Times and Gazette*. *The Lancet*, while noticing the meeting, made no mention of these resolutions.

MEDICAL NOTES.

— To a circular issued during the last year, addressed to every member of the British Medical Association, requesting an opinion, "yes or no," as to the admission of female practitioners to membership, replies were received as follows: No, 3072; yes, 1051.

— It is reported that Dr. B. W. Richardson's plan for a "city of health" is to be tried practically. A site has been selected in Sussex, where the city will be laid out in accordance with the sanitary plans suggested in Dr. Richardson's paper.

— The following comments we find copied in a Southern paper, *The Constitutionalist*, Augusta, Georgia, from an article in *Scribner's Monthly*. It shows how thoroughly the new movement in the Harvard Medical School has been appreciated: —

It is becoming notorious that a Harvard diploma in medicine is the most valuable diploma procurable in the country. The consequence is that the better class of students will seek it, until the other schools adopt the same plan, and do away forever with the present cheap and inefficient one. A Harvard medical diploma means something; the ordinary diploma means very little, even to those who get it. A Harvard diploma means work, achievement, scholarship, honor, success; and the best material in preparation for the profession will try for it at any sacrifice. The medical schools of New York and Philadelphia must wheel into line with Boston or be left behind, where they ought to be left. Nothing will be gained to the profession or the world by any other course, or in the long run to the schools themselves. These matters of health and sickness, life and death, are very serious ones, and there are few things more sad — more horrible, indeed — than to see a sick or an injured man in hands utterly incompetent to treat him. The truth is that a physician should be always a first-class man — first-class in his moralities, his character, his acquirements, his skill. No course of education can be too thorough for him, no preparation for the stupendous work of his life too exacting. Medical students are not too apt to think of this. By becoming familiar with disease and death they are far too apt to grow thoughtless, and to forget the preciousness of that possession which they are to be called upon to protect. They certainly will not think of it if their instructors make it easy for them to acquire their profession. The commission of a single unworthy man to practice the profession of medicine is a direct means of demoralization, of which no faculty can afford to be guilty. Let us manufacture no more doctors; let us educate them.

— M. J. F. Charrière, the noted surgical instrument maker of Paris, has lately died at the age of seventy-three. We obtain the following account of him from the *London Record*. Charrière was a Swiss by birth, but came to Paris when he was twelve years of age, to be apprenticed to a cutler. Having served a five years' term, he bought for a hundred pounds the little business where he had worked, and set earnestly to work to study his occupation, bringing to bear upon it the devotion and affection of a true artist. Soon Sheffield heard of the steel instruments which Charrière was producing, and consumers placed so great a reliance on his products that surgical instruments became an acknowledged branch of Paris manufacture. At the London Exhibition of 1851 Charrière competed boldly with the most eminent English makers, and so successfully (say the French journals) that the international jury had determined to award him the Council Medal, the highest prize they had to give, and that this was only prevented by the energetic jealousy of Englishmen. However this may be, a theatrical scene was got up when the French honors of the exhibition were distributed in November, 1851. Louis Napoleon, then President of the Republic, was officiating, when the Baron Dupin asked permission to proclaim "in the name of the thirty-six members of the French

jury, in the name of the Institute, and in the name of the Academy of Medicine, that M. Charrière was the first artist in Europe in his own specialty." In consequence of this speech Napoleon conferred on the old cutler's apprentice the officer's cross of the Legion of Honor. Twenty years ago M. Charrière handed over his business to his son, who, however, died soon afterwards. The father again took his old place, but had altogether retired several years before his death. His successors are two of his pupils, Messrs. Robert and Collin. To this firm was awarded a diploma of honor (the chief prize) by the jury of the Vienna exhibition.

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

[REPORTED BY A. T. CABOT.]

Sarcoma of the Breast. — Margaret F., aged forty, single, entered the hospital June 30th, giving the following history. Six months ago she first noticed a small, hard lump toward the inner side of the left breast. This grew steadily and rapidly, but, with the exception of occasional slight darting pains, has caused her no inconvenience. Its rate of growth has increased rapidly within the past three weeks, during which time she has been poulticing it.

The whole breast was occupied by a tense, fluctuating tumor, globular in form, and about the size of a cocoa-nut. The skin was very tightly stretched and slightly reddened. There were no enlarged glands in the axilla. Handling caused no pain.

July 1st. She was operated upon by Dr. Warren. The tumor was removed by an elliptical incision. While being dissected away from its deep attachments, a small opening in the sac allowed the escape of a portion of the fluid, which was dark, reddish-brown. A number of vessels were tied with ordinary silk, and the ends cut off short. The edges were brought together with interrupted sutures, a seton being placed in the lower angle to secure drainage. Carbolic-acid dressings were applied over everything.

For a day or two there was some oozing of a sero-sanguineous fluid from beneath the flaps; the wound, however, united almost throughout by first intention, one or two points remaining open until July 22d, when she was discharged, well. The ligatures caused no irritation, and were buried under the cicatrix. The bulk of the tumor was a large cyst, divided into several portions by thin transparent membranes. The specimen, examined by Dr. Fitz, was found to be a sarcoma, the cyst being probably the result of a degenerating process in the new growth.

Supernumerary Fingers. — Etta M., aged sixteen, entered the hospital July 19th for their removal. She had also six toes on each foot. Supernumerary fingers and toes have been hereditary in her family as far back as can be remembered. Her only sister has had them. Her father, grandmother, great-grandfather, and great-great-grandmother had this deformity, as also four out

of six members of her father's family and four members of her great-grandfather's family.

The one on her left hand is less perfectly developed than that on the right. They were both removed. In the right hand the finger was found to articulate with a little supernumerary metacarpal bone, which sprouted out from the metacarpal of the little finger. This was sawn off. In the left hand the finger articulated directly with the side of the fifth metacarpal, and was simply disarticulated. The flaps were brought into nice apposition with silk sutures, and care being taken to remove sufficient of the interdigital fold of skin to prevent a redundancy of flap at the distal margin of the wound, a source of discomfort and disfigurement in other cases operated upon in the family, where this precaution had been neglected. Carbolic-acid dressings were applied. On the following day both hands looked nicely, and she was discharged, to be further attended by her family physician.

Paralysis of the Posterior Arytenoid Muscles; Tracheotomy. — Thomas S. D., aged three, entered July 17th. For the early history of the case I am indebted to Dr. E. H. Bradford, who saw the child in his dispensary practice.

Eight months ago he had quite a severe cough; three weeks later one of the cervical glands enlarged, finally suppurated, and was incised towards the end of December. At this time the child, though not well, was not particularly sick.

About the middle of January the voice became husky, and there began to be considerable difficulty in inspiration and swallowing, and vomiting was easily induced. The symptoms now became severe, and there were numerous violent attacks of dyspnœa, during which the child would struggle for breath. He was pale, but not cyanotic. Pulse 100. Respiration 90.

An examination of the lungs revealed a few râles on both sides at the base, but no dullness. There was nothing to be seen on the palate. The tonsils and cervical glands on both sides were somewhat enlarged. A few days later there was a slight amelioration of symptoms, coincident with a renewal of the discharge from the old abscess. From this time there was a slow improvement until February 9th, when no "croupy" sound was heard on inspiration, though there was still hoarseness in speaking. On April 12th, the voice was still husky, and the inspiration again stridulous. From this time the hoarseness of breathing has continued, and the patient has progressively lost flesh and strength.

At the time of entrance inspiration was performed with considerable effort, the muscles of the neck acting strongly, and the intercostal spaces being forcibly sucked in. The air in entering caused a loud croaking sound like that heard in croup. There was not as much lividity as the obstruction to the breathing would lead one to expect. The child was able to move about and watch his companions at play.

Dr. Knight, who had previously seen the child, had, on examination with the laryngoscope, found the cords to be closely approximated at their posterior portions, leaving a small slit towards the front of the larynx.

The diagnosis of paralysis of the posterior crico-arytenoid muscles was made.

It was thought best to watch the child for a few days before deciding on the necessity of operative interference.

At the end of three days the child became decidedly weaker, and on the afternoon of July 21st, after refusing any nourishment all day, was very feeble, with a pulse varying from 160 to 170, and very weak, and Dr. Warren performed tracheotomy. Only one small vein required ligature. Immediately on opening the trachea, the chest, which was much contracted, could be seen to expand at each inspiration. From this time the child passed a comfortable night, and steadily gained flesh and strength, and a slight cough which he had at first disappeared. July 31st, he was up and about the ward, and though he had not entirely recovered his strength, he ate, slept, and appeared like a well child.

August 20th. An examination by Dr. Knight showed the vocal cords to be approximated as before the operation. Previous experience in these cases, described by Mackenzie and others, gives little hope that the muscles will regain their power, and there is a fair prospect that the patient will be obliged to wear the canula during his life-time.

LETTER FROM PHILADELPHIA.

Messrs. Editors, — It will not be premature to tell you something of arrangements now in course of preparation for the successful working of the International Congress, the meeting of which is so near at hand. You already know that the faculty of the university have courteously placed their buildings at the disposition of the congress. The general sessions will be held in the chapel of the university. This spacious apartment will seat six hundred individuals, and this, as well as the halls which will be devoted to section work, is supplied with fixed and movable blackboards (easels being provided for the latter), screens for lantern illustration, and in short every facility for teaching. In the whole city a more appropriate place of meeting could not have been found. The buildings are easy of access, being situated only twenty minutes by horse-car from the city proper. The quiet of a village surrounds them. No noisy externals will interrupt the smooth flow of the meetings. The rooms are new, fresh, well lighted, well ventilated, spacious, and convenient in every conceivable way.

In order to spare delegates the necessity, at the noon interim, of going into the city for lunch or dinner, an abundant collation will be provided daily in the university buildings, at the expense of Philadelphia physicians.

On the opening day (Monday, September 4th) the congress will meet in general session at twelve M.; the hour of adjournment will be two o'clock P. M. On the afternoon of this day sections will be in session from three to six P. M. During the remaining days of the congress, the general sessions will open at ten A. M. and adjourn at one P. M. Sections will work from two to six P. M. Only one question will be discussed daily in each section. The conclusions reached will be reported to the congress at the next morning meeting, and will then be voted upon.

There will be two addresses delivered before the congress each day.

Since the congress will be international in character, the Secretary of State or the Governor of Pennsylvania will formally open the proceedings on Monday, September 4th, at noon.

Touching the social aspect of the congress: On Monday evening the members of the profession in Philadelphia will entertain the delegates in the Judges' Hall at the Exposition grounds. On Tuesday evening Dr. Ellwood Wilson (212 South 15th St.) and Dr. William Thomson (1502 Locust St.) will hold receptions at their respective houses. On Wednesday evening Dr. G. G. Woodward, U. S. A., will lecture in the lower hall of Jefferson Medical College (10th St. below Chestnut), on The Scientific Work done at the Surgeon-General's Office. This will be followed by an entertainment to be given by Dr. George Strawbridge at St. George's Hall, Arch St., corner of 13th. On Thursday evening Henry C. Lea, Esq., the medical book publisher, will hold a reception at his house, corner of 20th and Walnut sts. On Friday evening — not on Thursday, as heretofore announced — will be given the grand subscription dinner, at St. George's Hall.

The following gentlemen from abroad have signified their intention to be present: As delegates, Professor Hüter, Medicinische Verein, Greifswald; Drs. Edward Hauser (president), Carl Lasige, S. Engelsted, Medical Society of Copenhagen; Dr. Edwin Hayward, Epidemiological Society, London; Dr. T. More Maddon, Dublin Obstetrical Society; Drs. John Barker, Joliffe Tufnell, William Stokes, Surgical Society of Ireland; Dr. Robert Barnes, Obstetrical Society of London; Dr. Gregorio Barraeta, San Luis Potosi; Dr. A. R. Simpson and Dr. Finlay, Obstetrical Society of Edinburgh; Drs. Wm. Adams (president), J. Langdon Down, Richard Davy (honorary secretary), Medical Society of London. As invited guests, Drs. J. A. Estlander, Helsingford; H. Wilson, Dublin; B. Ball, Paris; Morell Mackenzie, C. B. Radcliffe, Lauder Brunton, and Henry Power, London; F. W. Campbell and Dr. Fenwick, Montreal; Dr. Warlomont, Brussels; J. J. Kerr, China; Professor Lazarenwitch, Charkoff; Dr. Brown-Séquard, Paris. Dr. Fordyce Barker will also be present, and will read a paper, to write which he retired to Boulogne-sur-Mer. Dr. Priestly, of London, will be present if the health of Dr. Arthur Farre (now ill) improves sufficiently to allow the absence of Dr. Priestly. Stromeyer, as you know, is dead. Professor Lebert, who is announced in one of the early circulars to give an address before the congress, will not be present. Jaccoud, who had determined to come, has sent a letter of regret. Dr. Barnes, of London, will read a paper before the American Gynæcological Society, in New York, the week following the congress. For further details I will refer your readers to my letter in your issue of March 30, 1876.

It may be well, however, to repeat that the subscription dinner will be gratuitous only to foreign delegates and invited guests. American delegates will all be obliged to purchase tickets at ten dollars each.

No trouble is being spared in the arrangement of detail. It is believed that the whole affair will prove a brilliant success. It is to be earnestly hoped that American delegates will on no account permit the Exposition to interfere with their constant attendance at both general and section meetings. Foreigners

will of course remain long enough after the close of the congress to visit the Exposition thoroughly. It will be American physicians who will be tempted to attend the congress and the fair during the same week. The effect of such half-hearted interest was seen in the poor quality of section work at the late meeting of the American Medical Association. A similar lack of concentrated interest would severely prejudice the success of the approaching congress.

That excellent and sensible brochure, Medical Responsibility in the Choice of Anæsthetics, by Dr. H. MacNaughton Jones (London, 1876, H. K. Lewis, 136 Gower St.), has come to me among other club books. The questions discussed therein are of such interest to Boston medical men, in view of their gallant fight for ether and especially, perhaps, because of the capital missionary work accomplished among our transatlantic *confrères* by Drs. Jeffries and Fifield, that I venture to make allusion to the pamphlet and the conclusions of Dr. Jones. He discusses three questions, and gives a table stating "the anæsthetic employed, its mode of administration and the results in nearly fifty large hospitals in the United Kingdom."

His questions are: "Has it been proved by experience that any one anæsthetic, excluding all reference to rapidity of action, convenience, etc., is the safest?" He handles this question in a space of some eighteen pages, quoting largely from remarks of Dr. Jeffries, whose administration of ether he witnessed at the Moorfields Ophthalmic Hospital, and evidently having *then* and there become a proselyte. He also, under this head, describes the administration and comparative effects of the anæsthetics, and finally answers the question thus: "Ether has undoubtedly been shown and appears now to be universally acknowledged to be the safest anæsthetic."

His second question, bearing upon the first, is, "Has this satisfactory conclusion been supported by direct physiological evidence, derived from experiments on the lower animals, and our knowledge of the action of ether on the human economy?" Quoting from Wood's Therapeutics and from Schiff's accounts of his experiments with ether, Dr. Jones concludes by saying, "I say then that we may fairly answer this question in the affirmative." His third question is, "Can ether be availed of in the vast majority of cases, and administered with as great ease as any other anæsthetic, and with as favorable after results to the patient?" In discussing this question he refers, touching the comparative ease of administration of ether, to the various inhalers, and quotes the ringing words of Dr. Fifield in relation to the responsibility of medical men in the choice of anæsthetics. His conclusion is that ether can not only be generally used, but that it is the only safe and available anæsthetic. "The responsibility," he adds, "with our present knowledge, in the choice of anæsthetics, from henceforth is greater. Medical men who continue to use chloroform *alone* must not forget this."

These conclusions are really a triumph for America, for it is through the pronounced assertions of Jeffries, Wood, and Fifield, in connection with the universal harmlessness of ether at the hands of American medical men, that Dr. Jones and many others across the water have been converted into disciples of ether and enemies of chloroform.

Dr. J. M. Toner, of Washington, but formerly of Pittsburgh has made the

proposition to donate, for the foundation of a medical library in the latter city, his own collection of works of that character, valued at twenty thousand dollars. He imposes, however, two conditions. First, he asks that a fire-proof building be erected for the library, and second, that it be called by his name. Strangely enough the physicians of Pittsburgh, though naturally desirous to accept the gift, cannot yet reconcile themselves to the conditions. The cost of a fire-proof building will be great. This is one source of their objection to the conditions. A second objection is that if the library were called after Dr. Toner, other physicians who in the future might be inclined to add to the library would hesitate to do so, because their gifts would simply amplify the credit of one man, whose donation would form but a small proportion of the whole. A committee have been in correspondence with Dr. Toner, hoping to modify his conditions. Thus far they have been unsuccessful.

I learn from Washington papers that since the large and valuable Peter Force collection was bought by the government and added to the National Library of Congress, there has been in Washington no private collection so rich in American historical and biographical works as that of Dr. Toner; and that his industry and liberality in bringing it together have been fully equaled by the cheerful courtesy with which he has invariably placed it at the disposal of those who have had occasion to consult it. As to the strictly medical portion of this library, physicians speak of it as one of the rarest in the country, containing, as it does, complete files of all American medical journals, as well as the contributions to medical literature of all or nearly all American writers.

The value of this rare library has given rise to the general opinion that the medical faculty of Pittsburgh seriously err in not accepting Dr. Toner's generous offer at once, without allowing themselves to be one whit influenced by the conditions. Here is a splendid collection of medical and collateral works simply awaiting acceptance. It is worth far more than any possible similar future gift likely to be made in this generation. It is doubtful, indeed, whether just such a collection might ever again be had for the asking. The cost of the required building, it would seem, might be easily met without special encroachment upon the purses of Pittsburgh physicians, for every citizen of means in that city would doubtless gladly contribute to such an object. As to the name of the institution, could one be more fitting than that of its founder and earliest benefactor? Subsequent contributors would lose no credit because another man's name was attached to the library. The hope is publicly expressed in Washington that the library will not be accepted by the Pittsburgh physicians.

Cultivated Washingtonians do not relish the thought that such a wealth of literature should be lost to that city. Dr. Toner also offers to provide a fund whereby the proposed institution would secure the additional advantages of annual lectures on medical or scientific subjects. Pittsburgh has reason to be proud of her former townsman.

State and national conventions of dentists have been held in this city within the past four weeks. The dentists evidently met with earnest purpose, for they occupied many days in thoroughly discussing questions connected with their specialty.

The daily journals, in their notice of the exhibits of surgical instruments at the Exhibition, have devoted the largest space to descriptions of the exhibit of Messrs. Codman and Shurtleff, of Boston, giving this firm the credit of having contributed not only the largest but the most varied collection. The Centennial Medical Hospital continues its usefulness. Patients average three hundred per week in number. There have been no new cases of thermic fever, and the majority of the patients have asked relief from ailments which were merely temporary.

PHILADELPHIA, *August* 22, 1876.

THE FISHER INQUEST.

MESSRS. EDITORS, — We old fogies up here in Hampden never felt so behind the times as since reading in the JOURNAL the strange proceedings connected with the "Fisher case."

Those of us who were educated under the careful eye and hand of Prof. J. B. S. Jackson (honor to his name!) were taught to believe that the object of a post-mortem examination was, ordinarily, to observe the *pathological appearances* and not the *physiological conditions*. Are we now, in order to be considered "scientific" physicians, in all our examinations after death, to hunt for *corpora lutea*, and to tear up the periosteum of the long bones in search for previous fractures? If so, may we not be allowed to incorporate into our reports lengthy and accurate descriptions of the artistic tattooing we often find on the integument of our patients that "do business on the great waters"?

But, seriously, have we not, as physicians, certain *social* as well as *professional* responsibility in the exercise of our art?

Yours very respectfully, GEORGE G. TUCKER, M. D.

WESTFIELD, *August* 20, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING AUGUST 19, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	612	29.99	29.35
Philadelphia	825,594	409	25.76	22.24
Brooklyn .	506,223			24.92
Chicago . .	420,000	249	30.83	19.75
Boston . .	360,000	188	27.16	26.17
Providence	100,700	47	24.19	19.02
Worcester .	51,300	23	23.31	20.91
Lowell . .	51,700	34	34.19	20.55
Cambridge	50,000	36	37.44	23.31
Fall River	47,200	27	29.75	23.99
Lawrence .	36,000			25.96
Lynn . .	34,000	21	32.12	19.23
Springfield	31,400	12	19.87	20.93
Salem . .	26,500	19	37.28	22.92

Normal Death-Rate, 17 per 1000.

GERMAN COTTON DRESSING.

MESSRS. EDITORS, — One day last year Mr. Lawson passed around, at Moorfields, a sample of cotton that he had received from Germany. It resembled carded cotton in appearance, but it had the peculiarity of absorbing water and sinking almost immediately when thrown into a basin containing it. Mr. Lawson said the cotton was prepared by washing it in ether. This seemed plausible, so I treated some cotton in this way last winter, when the weather was such as to render the manipulation far from agreeable, but with a negative result. The great utility of a dressing that readily absorbs liquids and that also expands like a sponge when squeezed, not only to general surgeons but also to those who are specialists, and the cheapness with which it ought to be furnished, tempt me to ask through the JOURNAL how it can be prepared.

D. COGGIN.

SALEM, *August* 19, 1876.

CORRECTION. — In the JOURNAL of August 24th, page 226, for "tracheotomy" read "trachelotomy."

PARACENTESIS OF THE PERICARDIUM. — Dr. John B. Roberts, of Pennsylvania Hospital, Philadelphia, desires notes of all the cases of tapping of the pericardium that have been performed.

BOOKS AND PAMPHLETS RECEIVED. — Transactions of the Medical Society of the District of Columbia, July, 1876.

The Climatotherapy of, and the American Mountain Sanitarium for, Consumption. By Stanford E. Chaillé, A. M., M. D. (From the New Orleans Medical and Surgical Journal.)

West North Carolina as a Health Resort. By W. Gleitsmann, M. D., Asheville, N. C. Baltimore: Sherwood & Co.

An Address on some of the leading Public Health Questions. By J. M. Toner, M. D., President of the American Public Health Association. Cambridge: The Riverside Press. 1876.

Ninth Annual Report of the Directors of the Massachusetts Infant Asylum, April, 1876.

Twelfth Report of the Trustees of the City Hospital, Boston, with Reports of the Superintendent and Professional Staff, etc.

A Sketch of the Life and Writings of Louyse Bourgeois, Midwife to Marie de Medici, the Queen of Henry IV. of France. The Annual Address of the Retiring President before the Philadelphia County Medical Society. By William Goodell, A. M., M. D. Philadelphia. 1876.

Transactions of the South Carolina Medical Association. Annual Meeting, 1876, held in Columbia. Charleston, S. C.

Transactions of the Medical Association of the State of Missouri at its Tenth Annual Session. St. Louis. 1876.

A Clinical Lecture on the Use of Plastic Dressing in Fractures of the Lower Extremity. By David W. Yandell, M. D.

Laryngeal Phthisis. By C. W. Chamberlain, M. D. (From the Transactions of the Connecticut Medical Society.) Hartford. 1876.

A Clinical Lecture on the Treatment of Incipient Stricture by Otis's Operation. By Mr. Berkeley Hill, with Remarks by Fessenden N. Otis, M. D. (Reprinted from the Lancet.)

On Stricture of the Male Urethra; its Radical Cure. By F. N. Otis, M. D. New York: G. P. Putnam's Sons. 1876.

A Manual of Midwifery. By Alfred Meadows, M. D. Lond., F. R. C. P. Second American from the Third London Edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1876.

Non-Emetic Use of Ipecacuanha, with a Contribution to the Therapeusis of Cholera. By Alfred A. Woodhull, M. D. Philadelphia: J. B. Lippincott & Co. 1876.

Darwiniana: Essays and Reviews pertaining to Darwinism. By Asa Gray, Fisher Professor of Natural History (Botany) in Harvard University. New York: D. Appleton & Co. 1876.

THE BOSTON
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A CASE OF GLANDULAR AND SPLENIC LEUCÆMIA; ACUTE PLEURISY; PARTIAL PERITONITIS; DEATH; AUTOPSY.

BY ASSISTANT SURGEON S. Q. ROBINSON,
United States Marine Hospital Service.

THE patient, J. P., aged twenty-eight, a Texan by birth, but of New England parentage, entered the United States Marine Hospital at Chelsea, April 5th, under the care of Dr. Bancroft.

Previously to the present trouble, with exceptions to be hereafter noted, patient had always considered himself strong and well. His ten brothers and sisters, eight of whom are younger than he, have all had "kernels" about their necks, but have been otherwise healthy. Patient himself has had enlarged cervical and inguinal glands since he can remember. Six years ago, having two years previously suffered from typhoid, he was ill for five months with "bilious fever," becoming greatly reduced. No syphilis. Has had frequent headaches, and occasional colicky abdominal pains. For a month before the present trouble patient had been annoyed by gastric symptoms, but had not considered himself any the less able to work. No intermittent since childhood.

Symptoms of pleurisy had existed, following exposure, for twelve days before entrance to hospital. Physical examination showed the left chest tolerably well filled with effusion, and presenting the not uncommon but sometimes puzzling sign of marked *distant* bronchophony below the level of the fluid.

On the day following his admission, the patient having for the first time complained of pain in the abdomen since entrance, a not particularly tender area of dullness on percussion was found, extending from five inches from the spine to three inches beyond the median line, laterally, and from half an inch below the umbilicus to be lost in the cardiac dullness above. The borders of this space were to be made out as a pretty well-defined induration, yielding over the upper part a crepitus on pressure. Pulse 100. Temperature 100° F.

On the 29th, the dyspnœa having increased, and the apex beat of the heart being displaced to the right of the sternum, the chest was aspirated and seventy-eight ounces of sero-sanguinolent fluid were drawn

off. The needle was also introduced into the abdominal tumor and six and a half ounces of a darker-red fluid were removed. The lung expanded only imperfectly after the operation, which was repeated twice on the chest, after which comparatively little fluid accumulated, and five times on the abdominal tumor, which yielded on the last tapping two hundred and twenty-five ounces of badly-smelling, chocolate-colored liquid.

On May 25th patient began to complain of some enlarged and tender inguinal glands. As he was also greatly distressed by obstinate tympanites, which bismuth and charcoal, turpentine, carminatives, and the rectal tube failed to relieve, the finest needle of the aspirator was introduced through the abdominal wall, and sufficient gas was withdrawn to use up the attainable vacuum in three pint-bottles, with great relief to the patient, and without causing any untoward symptoms.

June 19th. Patient died.

Dr. Fitz, who was present at the autopsy, says, in a report which he kindly furnished, —

The head was not examined. The cervical, axillary, and inguinal glands were considerably enlarged. The glands and tissue of the anterior mediastinum were enlarged, thickened, and converted into a dense, gray, homogeneous mass. The heart was healthy. Clots, removed from the right side of the heart and from the large veins, were quite firm, yellowish-white, and opaque. The left pleural cavity contained a considerable quantity of yellow fluid. The pleural surfaces were reddened, thickened, and covered with recent false membrane. The left lung was compressed. The right lung was pale; otherwise not remarkable.

There was a circumscribed peritonitis, forming a cavity bounded by omentum, stomach, left lobe of liver, and the abdominal walls. This contained a fluid resembling chocolate and milk. The walls were coated with fibrin and apparently curdy pus. In this cavity the greatly enlarged spleen, weighing four or five pounds, was found. Its hilus contained numerous globular cavities, eroded as from decomposition. The splenic vein was completely plugged with a large white thrombus. On section of the spleen a homogeneous reddish-gray structure became evident, in which neither trabeculæ, follicles, nor pulp were to be discriminated. Under the microscope, the spleen was filled with white corpuscles, the enlargement being rather due to an increase of the pulp than to an enlargement of the follicles. The sections presented numerous round clusters of acicular crystals, which were diffused throughout the organ. The left kidney was flattened, the right anæmic, but neither gave any evidence of alteration due to the general condition. The bladder was not abnormal, nor were the stomach and intestines.

The liver was enlarged symmetrically, the gross appearance of its

section presenting nothing abnormal. Under the microscope its capillaries were filled with white corpuscles, which seemed to outnumber the red ones. Glisson's capsule was extensively infiltrated with round cells. The mesenteric glands in general were enlarged, those on the posterior wall of the circumscribed peritoneal cavity projecting as nodular masses of the size of plums, red, and resembling the spleen in appearance.

A CASE OF IDIOPATHIC GLOSSITIS.

BY URANUS O. B. WINGATE, M. D., OF WELLESLEY.

At three P. M., June 9, 1876, I was called to Katie M., a domestic, single, born in Ireland, who had been in this country two weeks, was twenty years of age, had always been healthy and robust, and stated that she never took any medicine in her life. On the afternoon of the day before, she began to have a pain at the base of her tongue. She passed a restless night, but attended to her work in the morning until about noon, when she grew rapidly worse and was obliged to give up and go to bed.

I found her complaining of great pain in her tongue. She had vomited several times, the vomitus consisting of food only. She stated that she felt well with the exception of the pain in her tongue, which was much swollen, hard, and covered with a yellowish-white coat. On attempting to protrude it, she suffered great pain, and any movement of the organ seemed almost impossible. She spoke with great difficulty, and deglutition was extremely painful. Pulse, 130 per minute. Temperature in the axilla, 103.2° F. There was a slight flow of saliva, and moderate thirst. The patient presented a neat appearance, and the hygienic surroundings were good. Hot applications directly under the chin, chlorate of potash wash for the mouth every half-hour, and bits of ice on the tongue all the time when awake were ordered. Also fifteen grains of bromide of potassium with one fifth of a grain of morphine were to be given in a wine-glass of water every four hours, to relieve pain and produce sleep. Milk diet.

June 10th. The patient slept a little during the night, while under the influence of morphia. The tongue was swollen so badly that she could not speak intelligibly, and was very painful. She had not vomited for twenty hours. The bowels were constipated. There was no pain except in the tongue. The tonsils were unaffected. Pulse, 120. Temperature, 103°. There was slight dyspnœa. The same treatment was continued, and in addition pil. hydrarg. grs. iii. at night were ordered, to be followed early in the morning by a half-ounce of sulphate of magnesia in solution.

June 11th. She had slept very little. The tongue was still swollen

badly. The coating had disappeared, and the tongue looked clean and presented a very dark red color. It filled the mouth and protruded slightly between the teeth. There was a little flow of saliva, less pain, and she could swallow milk much better. The patient now complained of weakness. There was complete anorexia. Pulse, 90. Temperature, 100°. The same treatment was continued. In addition to milk, beef-tea and eggnog were ordered.

June 12th. The patient was much better. She had slept well all night. The tongue was very red, but less painful and considerably reduced in size. She could talk quite well, and could swallow food and medicine with much greater ease. Pulse, 80. Temperature, 98.5°. She complained only of weakness and loss of appetite. She was to continue the mouth wash, to use the ice occasionally, to omit all other medicine, and to have two teaspoonfuls of Wyeth's elixir of calisaya three times daily.

June 15th. She had returned to her work, and stated that she felt quite well. The tongue was a little enlarged, and still looked abnormally red.

June 20th. The tongue looked natural, and she had made a complete recovery.

George B. Wood, M. D., in his Treatise on the Practice of Medicine, says, "Glossitis may result from the usual causes of inflammation. Perhaps the most frequent cause is direct injury, resulting from irritating or corrosive substances, scalding drinks, wounds or bruises, or the bites or stings of venomous insects. Sometimes the affection is produced by a direct propagation of inflammation of the tonsils, and it occasionally arises in the course of exanthematous fevers. In some instances the chief force of mercurial action appears to fall upon the tongue and produce tumefaction." The above case could not be traced to any of these causes. Flint, in his work on Theory and Practice makes no mention of glossitis as a disease *per se.* Dacosta speaks of it as a dangerous affection, and fortunately rare. Tanner in his Practice of Medicine says, "Inflammation of the tongue is a rare affection now that mercury is seldom used so as to produce salivation. It is generally met with as an accompaniment of other diseases rather than as an idiopathic affection." Farther on he says, "When glossitis arises idiopathically, it gives rise to fever, mental depression, and general weakness," thus indicating that it may be idiopathic. Erichsen, Druitt, Bryant, and others speak of glossitis as a rare affection.

In the Transactions of the Medical Society of the College of Physicians, published in the *Dublin Journal of Medical Science* for April, 1876, can be found an account of a case of idiopathic glossitis, by Henry G. Croly, F. R. C. S. I.[1] Mr. Croly, it appears, has observed thirteen or

[1] JOURNAL, July 6, 1876, page 23.

fourteen cases of glossitis during twenty years of hospital practice, and he thinks it not so rare as some have supposed. He believes that the inflammation commences at the base and extends forward. This seems of some interest, as most of the books speak of it as commencing at the tip and extending back. In the above case it commenced at the base, and gradually extended over the entire organ. In Mr. Croly's last case one side of the organ only was affected.

As regards treatment, Mr. Croly recommends purgatives and free incisions, and he gives some useful and important suggestions in regard to making the latter. Undoubtedly free incisions give great relief. They were proposed in this case, but were refused, and as many patients fear the knife more than almost any risk, the question arises as to whether or not most patients would not do quite as well without the knife as with it, provided that other treatment is not neglected. The rareness of reported cases of idiopathic glossitis in the journals has prompted me to report this case.

CASE OF ATRESIA ANI VAGINALIS.[1]

BY HENRY TUCK, M. D. (HARV.),
Visiting Physician to the Boston Lying-In Hospital.[2]

A. B., single, aged twenty-six, of American parentage, a resident of a neighboring town, was sent to Boston by a medical friend to be under my care in her confinement. She was a lady in good social position, but while riding with a young man, her intended husband, having been rendered unconscious by drugged candy, as she claims, was raped by him. This occurred on May 26th. In the following September, not having seen her catamenia for three months, and finding herself increasing in size, she consulted her family physician, who, not suspecting the nature of the case, treated her for amenorrhœa. Pregnancy was finally suspected, and she was treated by an irregular physician, who tried to bring on an abortion by the use of drugs. No operation, however, was attempted. After this she passed into the hands of a competent physician, who made a vaginal examination, and ascertained the real state of the case. By him she was a few months later sent to Boston and placed under my care. Confinement was expected about March 3d but did not occur till March 14th, making her period of gestation two hundred and ninety-three days. The head presented and the labor was normal in every way, except that it was rather long, twenty-three hours, and there was very little liquor amnii, as has been before noticed in cases of prolonged gestation. The

[1] Foerster's Path. Anat., part ii., p. 98.
[2] Read before the Obstetrical Society of Boston.

child was a healthy, well-developed girl, and weighed eight and a half pounds. I was called to the case when the first stage was perhaps half completed. The patient lay on her side, with her back toward me. On making a vaginal examination, and passing my fingers from the anus toward the pubes, and into what was thought the vagina, the head of the fœtus was felt, but through what seemed a thick vaginal septum. On withdrawing the finger it was found covered with fæces, and I was rather mortified at having, as it seemed, mistaken the rectum for the vagina. Placing the patient on her back, and making another attempt at a vaginal examination, I found the os about half dilated and the head well down in the pelvis. My finger was again found covered with fæces, and, suspecting that something must be wrong, I made an ocular examination of the parts. At the normal site of the anus the skin was deeply pigmented, there was a depression to be felt, and it seemed as if there were a sphincter ani covered with skin. On separating the labia at the posterior commissure, about a half-inch above it was the anus in the septum between the rectum and vagina. This anus was not patulous, but was closed by a sphincter, though rather a lax one. It was entirely under the control of the patient, who has never had any difficulty in retaining her fæces. On questioning her afterwards it was ascertained that she had no knowledge of her condition. She stated that through life she had been a good deal troubled by constipation, so much so as to often put herself under medical treatment for it. The only thing the patient had noticed was that after defæcation she had always had to wipe herself more carefully than women usually did. The patient was anxious to have some operation performed, but this was not advised, and she was simply told to use a rectal injection whenever constipated.

After her return home, the patient wrote that on questioning her mother it was found that she was aware of her daughter's condition, but had thought best never to speak of it to any one, not even to her own physician.

THE METRIC SYSTEM AS APPLIED TO THE OPHTHALMOSCOPE.

BY E. G. LORING, M. D.

It is proposed by the leading ophthalmologists to adopt a new system of notation for the expression of the power of lenses. A word, therefore, as to the effect of this system on ophthalmoscopes may not be inopportune. In the old system the strength of a glass was denoted by its focal length, which fortunately happened, with glass, to correspond with the radius of curvature on which it was ground. As the power of a lens is inversely as the radius of the sphere on which it is ground,

its strength can always be expressed in the form of a fraction. In the old method, for instance, a six-inch lens was expressed by the fraction $\frac{1}{6}$.

In the new system it is proposed to use the metre as the unit. No. 1 of the new series would therefore be a glass of one metre focal length. It is proposed to call this one dioptrie, or 1 D. The refractive power of such a lens expressed in a fraction is therefore $\frac{1}{1\,M}$. As 1 M, or one metre, is equal to 37 inches (French), $\frac{1}{1\,M}$ would be equivalent to $\frac{1}{37}$, old style. No. 2 would be twice as strong, or 2 D, or $\frac{2}{37}$, old style; and so on throughout the series. Glasses weaker than $\frac{1}{37}$ are expressed by fractional parts of a dioptrie; thus, 0.5 D would equal $\frac{1}{37\times2}$, or $\frac{1}{74}$, old style.

Anticipating the adoption of this new system, ophthalmoscopes have already appeared with the new notation, a very ingenious one being that recently described by Professor Landolt.[1] By two superimposed disks, as in what is known in this country as a combination ophthalmoscope, a large selection of glasses is given with small focal intervals; so small, indeed, as to render many of the combinations useless.

There can be but little doubt as to the advantages of a simple over a combination instrument, no matter how ingeniously this may be contrived. A simple series of glasses, where every glass has its definite focal value stamped on the disk, will, I think, always be preferred by the majority of observers. To this end all that is required to adapt the instruments now in use to the new system is to change, where necessary, the glasses ground on the old system to those ground on the new. But even without any change at all, the numbers of the new system corresponding to those of the old might be engraved just below those already on the disk. Both systems would then be given at a glance. To find these numbers we simply have to divide the equivalent of a metre in inches by the focal length of the glass. Thus, $+\frac{1}{12}$ old style would be found in the new by dividing 37 by 12 = 3, neglecting the small decimal fraction; and so on throughout the series.

Twenty-five perforations give as frequent and as small intervals as the human eye can detect through a perforated mirror. Indeed, I believe this number is rather too great, than too small, and the advantage of not being compelled to make any calculations or to change the multiplying or dividing factors in both the upper and lower disk cannot be counterbalanced by the most ingenious combination.

Should a combination ophthalmoscope be desired, the simplest way, instead of using two disks, is to have the ordinary clip, furnished with two glasses, such as is now used in the cheaper ophthalmoscopes made by Mr. Hunter. Each glass might represent one half dioptrie, thus: +.5, —.5. Without the clip, a regularly progressing series of dioptries would be represented thus: 1, 2, 3, etc.; with the clip, the intervening

[1] Klin. Monatsblatt, July and August, 1876, p. 223.

half D between two succeeding whole numbers would be given. We should then get a series running 1, 1.5, 2, 2.5, etc.

With properly chosen glasses a large series of refractive values could be thus obtained with the mininum of trouble or calculation. Indeed, the cheaper ophthalmoscopes with a single disk and with a clip for two glasses, as figured in my brochure on refraction, could readily be changed into the new system without altering their shape in any way. Instruments adapted to the new style can now be obtained from Mr. Hunter, 1132 Broadway, New York.

RECENT PROGRESS IN ANATOMY.

BY THOMAS DWIGHT, M. D.

Methods. — Among new methods of microscopic arrangement we noticed in our last report one by Mr. H. R. O. Sankey for coloring brain with aniline black. He has since then [1] given the details of the whole process, which is very peculiar, but well adapted to large preparations. Cuts are made of a perfectly fresh brain, and, of course, are made as thin as convenient, but, *mirabile dictu*, an eighth of an inch is not too thick. The sections are dropped into water as they are cut, and when the time comes for staining, all the fluid is poured off except just enough to cover them. "To this there is to be added an equal quantity of a one per cent. solution of the dye, so that, in fact, the sections will be now in a solution containing half of one per cent. of the dyeing material." After twenty-four hours the sections are floated off into water, and then put on glass slides to dry. As they do so they of course adhere to the glass, and the next step is to cut off enough to leave only a very thin section. For this Mr. Sankey has an instrument of the nature of a plane, but it can be done with a razor. There then remains only the process of clearing the specimen with dammar or Canada balsam. The views thus obtained are said to be very fine; the ground substance is of a faint purplish blue, the cells dark purple, and the nuclei black. The course and subdivisions of the fibres can be very clearly followed.

Ganglion Cells. — Prof. G. Schwalbe [2] has made some addition to our knowledge of the structure of ganglion cells and of their development. The subject is not of sufficient general interest to warrant a long abstract, so we will merely point out that he has shown that ganglion cells are quite different structures in different places and at different ages, and then give the results of his studies of the development of the cells in the retina of the calf. In the calf they are of various

[1] Quarterly Journal of Microscopical Science for April, 1876.
[2] Jenaische Zeitschrift, Band x., Heft 1, 1876.

sizes and present various grades of development, while in the ox they appear much the same. Schwalbe writes, "The substance from which the membrane of the nucleus and the nucleoli are subsequently formed is originally equally distributed throughout the nucleus which it more or less completely fills, as it contains many little vacuoles which are filled with another substance. As the nucleus grows, the substance in the vacuoles increases without there being any appreciable increase of its other parts. The result of this is that these latter are torn into various fragments, of which one regularly becomes the enveloping membrane of the nucleus presenting a number of angular prominences projecting inwards, which are fixed nucleoli, while the other fragments roll themselves up into one or more nucleoli. As the clear substance inside of the nucleus enlarges, the prominences on the membrane disappear from the distention of the latter. Thus the whole process may be viewed as a vacuolization of the same nature that takes place in vegetable cells to cause the separation of the protoplasm and cellular juice. I shall hereafter designate as *nucleolar substance* the shining elements that constitute the membrane of the nucleus and the nucleoli, and as nuclear fluid (Kernsaft) the clear watery substance that fills the nucleus." It should be noticed that in ganglion cells from most of the other regions the nucleus has no membrane.

The Horizontal Plane of the Skull.[1] — "If we wish to measure its [a skull's] height, if we would decide how much the jaw is thrown forward or the occiput backward, whether the parietal protuberance is on front of or behind its normal position, what is the position of the foramen magnum, what is the inclination of the different planes; we must always take the horizontal position of the skull as the starting-point. . . . . If we wish to make drawings of skulls for comparison, we cannot do so till we have placed the object accurately in the normal, that is, the horizontal position." Thus writes Dr. Schmidt at the beginning of the paper, and all who have tried to compare many skulls with one another will feel the truth of his remarks, and will also recognize that there is great difficulty in deciding what plane is normally horizontal. It is no doubt true that theoretical accuracy is not to be obtained, but the question which of the various planes that have been suggested is the best, is important. The following planes may be mentioned: (*a.*) That decided upon by the German anthropologists who met at Göttingen in 1861, which is that of the zygoma when it is straight; but for skulls in which the anterior end of the zygoma bends upward the line is continued to the lower border of the orbit. (*b.*) That of Broca. This distinguished anthropologist started on the simple but ingenious premise that the head is horizontal when, the body being upright, the eyes are looking directly forward, and that, consequently, we should look for a plane that is parallel

[1] Dr. Schmidt in the Archiv für Anthropologie, Band ix., Heft 1.

to that of vision. This he held to be one from the condyles to the lower border of the superior alveolar process. (*c.*) That of Busk, which is obtained as follows: from an imaginary line between the auditory meatuses draw one to the junction of the coronal and sagittal sutures; this will be nearly vertical, and one at right angles with it will "coincide pretty nearly with the base line of most writers, and in most cases with the floor of the nostrils." (*d.*) That of v. Jhering, running from the external auditory meatus to the lower border of the orbit. (*e.*) That of His, which runs through the anterior nasal spine and the posterior border of the foramen magnum. The posterior boundary cannot, of course, be felt on the living, but the inferior occipital ridges, which usually can be, are on about the same level. This plane is nearly parallel with that of the zygomata.

Impressed with the necessity of ascertaining the plane which in all races and both sexes corresponds most closely to the plane of vision, Dr. Schmidt, by means of a simple instrument, investigated the question on large numbers of persons. Beginning with Germans, he made ten observations on each of fourteen men from nineteen to forty years old, first telling them to put the head in the natural position and to look straight forward, and, secondly, putting their heads in what he thought the natural position (passive Stellung). He used the latter almost wholly with women, as they showed a tendency otherwise to hang their heads during the examination, and with the lower races, as he often could not make them assume a natural position. He examined many negroes in America and in Egypt, besides Arabs and Nubians in the latter country. He also compared many skulls to ascertain which of the above-mentioned planes and several others was on an average most nearly horizontal, and which had relatively the most constant position. The planes of the Göttingen meeting, of His, and v. Jhering were found the least variable, and in the order of the names. Dr. Schmidt's final conclusion is that the Göttingen plane, namely, that through the zygoma and the lower border of the orbit, is the best horizontal plane that can be found. That it approaches most nearly to the true physiological horizontal plane and presents the fewest variations of any that have been proposed.

The Action of the Intercostals. — Professor Rutherford[1] has hit on a very simple way, which though necessarily inaccurate is yet satisfactory, of showing the action of the intercostal muscles. The utter absurdity of the mechanical model known as Hamberger's bars, that move up or down according to the position of an elastic band, has of late been pretty generally recognized, but Professor Rutherford has clearly shown its inapplicability by putting elastic bands to represent the intercostal muscles on to the ribs themselves. When the bands were placed between

[1] Journal of Anatomy and Physiology, April, 1876.

the bony parts of the first four ribs these were about equally elevated, whether the bands were in the position of the external or the internal intercostals. Bands placed in the position of the internal intercostals between the bony parts of the upper seven ribs caused a marked elevation of the ribs and an expansion of the thorax. The author continues as follows: "These experiments entirely put an end to the statement, founded on Hamberger's model, that the interosseous parts of the internal intercostal muscles *must* depress the ribs, because that is the only costal position which permits of a shortening of these fibres. Different results are obtained if the elastic bands be placed only between, say the second and third, or between the third and fourth ribs. The upper rib is then drawn down, while the lower is drawn up; both when the bands are arranged after the manner of the internal and of the external intercostals; and if the lower rib of the pair be held immobile, the only movement is a drawing down of the upper one. Both intercostals are, therefore, able to elevate the ribs when the more fixed point is above, and to depress them when the more fixed point is below. The upper rib is more fixed than the others, for it, unlike the others, has no joint between its cartilage and the sternum; it is also less flexible than the lower ribs, and, moreover, it being an arc of a smaller circle than the others, is less affected by forces tending to approximate it to the other costal arcs.

"Elastic bands were placed in the position of external intercostal muscles between the upper eight ribs on *both* sides of the chest. Great lateral expansion of the chest resulted. The upper end of the sternum was elevated only to the extent of a quarter of an inch. The ensiform cartilage was lifted forwards an inch and three quarters. The elastic bands were then removed and placed in the position of interosseous parts of internal intercostal fibres between the same ribs. There was neither elevation nor depression of the upper end of the sternum, while the ensiform cartilage was lifted forwards to the extent of three quarters of an inch."

These results tend to confirm the views of the reporter, published in the JOURNAL of May 1, 1873. That both sets of muscles tend to draw the more movable ribs to the more fixed ones may be looked upon as certain. It is probable that the lower ribs are nearly if not quite fixed during inspiration, in order to give a firm point of action to the fibres of the diaphragm, and thus it is not true throughout the thorax that elevation of the ribs implies inspiration or their depression expiration. Though it has never been satisfactorily proved, there can, we think, be no reasonable doubt that the two sets of intercostal muscles act together.

Arteries of the Orbit. — Dr. Zuckerkandl,[1] prosector at Vienna, has written an interesting paper on anomalies of the arteries. Most books

[1] Medicinische Jahrbücher, 1876, Heft iii.

on anatomy mention an orbital branch of the middle meningeal artery that passes through the outer end of the sphenoidal fissure, sometimes through a separate canal, and, running in the outer part of the orbit, anastomoses with the ophthalmic artery. According to Sappey, it is not very rare for this branch to be nearly as large as the meningeal itself, and to take a considerable share in supplying the contents of the orbit. Zuckerkandl describes four cases in which the middle meningeal arose from the ophthalmic artery and turned back from the orbit through the sphenoidal fissure into the cavity of the cranium. It was always an important artery, and larger than the ophthalmic. In two cases it gave branches to the orbit, in two it did not. The foramen spinosum in such cases is either closed or very small, and the foramen ovale usually larger, owing, perhaps, to an increase in size of the lesser meningeal artery that passes through it, but this point is not made very clear. It is possible to recognize by the appearance of a macerated skull that this anomaly has existed, for of course the grooves for the middle meningeal will not present their normal arrangement. Zuckerkandl has met with two such skulls in one hundred and fifty.

The Veins of the Tongue. — These have received but little attention. Luschka, indeed, in his monograph on the larynx, has described the submucous net-work that is found on the back of the dorsum, but otherwise nothing has been added to our knowledge on the subject for many years. We are very glad to find the subject taken up by Zuckerkandl,[1] who classifies the veins as follows: (*a*) those accompanying the lingual arteries, which may be called the lingual veins proper; (*b*) the hypoglossal veins, following the nerves of the same name; (*c*) one or two veins following the gustatory nerves: (*d*) the net-work on the dorsum and the plexus surrounding Wharton's duct. He devotes himself chiefly to the first two classes. The artery is accompanied not by one but by two veins, one above and one below, the latter usually being the larger. They anastomose pretty freely, and sometimes form quite a plexus around the artery. They also communicate in various ways with the veins of the other systems. The hypoglossal also has two veins, of which the lower only is of practical interest. This is owing to the fact that it is prominent on the under surface of the tongue beside the frænum, and later lies in the triangle in which the lingual artery is sought, on the outer surface of the hyo-glossus muscle. It anastomoses either with its fellow or with the vein following the gustatory nerve of the opposite side, and has various communicating branches with the other veins of the same side of the tongue. The veins that accompany the gustatory nerve are very irregular, but assist in uniting the other veins.

The Lymphatics of the Joints.[2] — About two years ago Dr. H. Till-

[1] Loc. cit.

[2] Archiv fur mikroskopische Anatomie, Band xii., Heft 4.

mans published an article on the minute anatomy of the joints, which was noticed in the report on anatomy of March, 1875; since then the same investigator has studied the lymphatics of the joints, which he did not discuss in his previous paper. This time Tillmans introduced coloring matters into the joints, and endeavored by flexing and extending the latter to drive the fluid into the lymphatics of the synovial membrane. But as the presence of normal synovia interfered with this purpose, a hole was made through the bone into the joint without disturbing the capsule, the synovia washed out by salt solution, and the coloring fluid introduced; nevertheless, after long-continued movements no lymphatics of the membrane could be found, and there was merely a diffused general staining. Between the cartilage cells there was some appearance of a net-work. This the author accounts for by his theory that hyaline cartilage is a fibrous structure. None of the fluid entered the bone, but it was found in the muscles and fibrous tissue. By direct injection into the capsule itself Tillmans succeeded in showing a rich net-work directly under the endothelium, and the finest capillaries. There seems to be little doubt that the injection entered into true lymphatic spaces. An important discovery is that the elastic fibres of the connective tissue are attached to the endothelial cells of the lymph spaces, so that swelling of the tissues tends to open the canals containing the lymph. Though the results of his first class of experiments are negative, the author does not deny the possibility of the existence of direct openings of lymph vessels into the joint. He believes that under normal circumstances the fluid in the articular cavity, either by the motions of the joint or by increased intra-articular pressure when the joint is at rest, is pressed into the synovial membrane, and thence makes its way into the lymph spaces. On the strength of his experiments the author hints at the advantage of compression in effusions into the joints. If the knee-joint of a dog is filled as full as possible with a colored solution and then enveloped in elastic bandages, in twenty-four hours the fluid will be almost or entirely absorbed.

The Structure and Development of the Ovary.[1] — This paper, by Dr. James Foulis, of Edinburgh, is one of the most valuable of recent contributions to microscopic anatomy. The author overthrows the general view that at a certain stage the ovary is a tubular organ, and that the Graafian follicles are formed from tubular structures. This appearance of tubes is owing to the irregularities of the surface of the ovary, caused by groups of eggs forcing their way towards the surface. We cannot do better than to quote the condensed account of Foulis's discoveries, given in the eighth edition of Quain's Anatomy, which has recently appeared: "The origin of the primordial ova from the superficial germ-epithelium is fully confirmed, and the stroma of the ovary is shown to

[1] Quarterly Journal of Microscopical Science, April, 1876.

be produced by a direct growth from the subjacent tissue situated on the median side of the Wolffian body. The nucleus of each epithelial corpuscle becomes the germinal vesicle of the primordial ovum; a nucleolus soon appears within (the macula), and a clear, homogeneous protoplasm collecting round the vesicle forms the commencement of the yolk. The inclosure of the primordial ova in a Graafian follicle takes place by the outgrowth of processes of the connective-tissue stroma, so that the former, being surrounded by these processes, become more and more imbedded in the substance of the ovary. At the same time, however, the germ-epithelium corpuscles increase in number by proliferation, and extending themselves inwards are in their turn inclosed singly or in clusters by the processes of the stroma. But what is most important and novel in these observations is this, that Dr. Foulis has traced the formation of the cells of the membrana granulosa to the nuclei of the fibro-nucleus tissue constituting the stroma, which gradually insinuate themselves round each primordial ovum, along with the processes of the vascular tissue of the stroma, which afterwards forms the wall of the follicle. The connective-tissue nuclei which first surround each ovigerm are comparatively few in number; but they soon increase by cell multiplication, and form the complete membrana granulosa by which the follicle is lined."

(*To be concluded.*)

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

JAMES R. CHADWICK, M. D., SECRETARY.

MARCH 25, 1876. The president, DR. H. W. WILLIAMS in the chair.

A Case of Pharyngitis complicated with Otitis Media was reported by DR. E. W. CUSHING as follows: —

The patient, a widow fifty years old, visited me on February 9th, and stated that she had been suffering for a week with a severe sore throat and cold in the head, attended by great pain and marked depression of strength. She stated that when the throat was worst there were white patches on the pharynx and palate, which were tender and painful; also that the skin of the neck was swollen and the glands enlarged. There was acute naso-pharyngeal catarrh, with pain, obstruction of respiration, and discharge of mucus and sometimes of blood.

It afterwards appeared that this attack had come on a week after attending the funeral of a child who had died of diphtheria, where she had bent over the open coffin, and had put in her mouth a flower which had been lying upon it. Another lady, who was present and had also held in her hand and smelt flowers from the coffin, suffered from a similar attack of such severity that she was confined to her bed for some days and to her room for some weeks.

When the patient called on me the acute symptoms had subsided, leaving a

very disagreeable sensation of stuffiness in the nasal passages, with black scabs in the nostrils; there was an annoying discharge into the pharynx and some hoarseness. The fauces were somewhat reddened, the vocal cords congested and covered with mucus. By the use of a syringe anteriorly a large quantity of foul mucus, with black masses of inspissated secretion, were removed from the nasal passages, and a spray sulphate of zinc, fifteen grains to the ounce, was applied to the pharynx and nares. The next day she felt better, and still more mucus was dislodged by the nasal douche, using salt and water, and as the patient did not feel capable of using the posterior nasal syringe, she received a nasal douche, with instructions and cautions for its use.

Nine days after, I was called early in the morning, and found the patient suffering from symptoms of acute otitis media, with intense pain, tenderness over the mastoid, etc. Leeches to the tragus and warm instillations gave only temporary relief, and as the membrana tympani was evidently on the point of bursting, paracentesis was performed the next day. Under the use of cleansing injections to the meatus and Politzer's method of inflation, the hearing, which was wholly lost, returned, and although the case was protracted by furuncules in the meatus, they finally yielded to local treatment, iron and quinine.

On investigation, it appeared that eight days after the first use of the nasal douche the patient, who had used it every day, felt some pain in her throat but none in the ear; she was recommended by a neighbor to take a Turkish bath; accordingly, although she had already taken a warm bath in the morning, she went, at eleven o'clock, to Dio Lewis's establishment, but, being afraid of the cold water, she insisted on being washed off with warm water after profuse perspiration. Naturally there was no reaction, and she went home at once, with her hair wet, becoming thoroughly chilled before reaching her house. For two nights she waited in hopes that the terrible pain in the ear, which supervened the same evening, would pass away, and sent for me only when the inflammation was well advanced and the pain intolerable. During the progress of the case a daughter and a servant of the patient were attacked by pharyngitis accompanied by unusual depression. The former soon improved under local and tonic treatment. The latter, who had a curious dark, dry patch on the posterior pharyngeal wall, was unable to continue her work, and is still weak, although the throat is nearly well.

The fact that this case occurred after exposure to diphtheria was reported to your committee, but the question of the amount of danger to the ear involved in the use of the nasal douche is of practically great importance. It is, moreover, a question on which authorities do not agree, as writers on diseases of the throat rather overlook the dangers to the ear arising from the use of the nasal douche, while otologists perhaps slight the advantages to the pharynx and nasal passages which may be obtained from it.

Dr. B. J. Jeffries presented the account book of Mr. William Davis, surgeon-apothecary in Boston from 1672 to 1676, and of his successors down to the year 1737. The book had been among the papers recently discovered in Faneuil Hall. Among other interesting entries were quite a number of urinals, charged to Sir Thomas Temple, the original owner of East Boston and Noddle's Island. As he died shortly after, Dr. Jeffries thought that the nature of his fatal malady might be conjectured.

Dr. C. D. Homans read the following letter, addressed to his father, the late Dr. John Homans, then residing in Brookfield, near Worcester.

Boston, *July* 25, 1828.

Dr. Homans:

Dear Sir,— Yours of the 16th inst. came to hand in due time. You request my opinion of the probable chance of practice in case of removal to this city. To the decision of this question I feel inadequate, because I know not the extent of your facilities. It is my opinion on general principles that the same degree of attention to practice which commands business in the country will command business in the city, and that your removal to Boston, with the accompaniment of the active and economical habits of the country, will ultimately command you success in the city. How long it might require to collect a thousand per annum, time and experiment alone could determine, although I am inclined to the belief that you must earn three thousand to collect one thousand dollars. The majority among us are too poor to pay their physicians much; still, after a fair start you might earn three thousand in the city with the same facility with which one thousand would be earned in the country.

The city has 60,000 inhabitants and seventy-one regularly-bred physicians. About one half, from either youth or age, have not much to do. The irregular physicians are numerous, at the head of whom in popular influence we may place Thompson, who has formed his botanical society, whose members have individually learned his system of practice by hot drops, sweating, etc. The disciples of this system, perhaps, may embrace one sixth of the population of Boston. The patent medicines I believe to be employed in about another sixth of the cases. Another sixth of the people are too poor to pay a physician's bill. The next remaining sixth of the poorest of the people can pay but little. About one sixth can pay a full bill, and the next sixth two thirds of a bill. Suppose my hypothesis approximates the truth, we say ten thousand pay a full bill and support fifteen practitioners; another ten thousand pay two thirds of a bill and support ten physicians; another ten thousand pay a third of a bill and support five. The transient population in the city may possibly support five more. If my hypothesis approach to anything like accuracy, thirty-five physicians and surgeons can derive an adequate support from the practice in the city. Compare yourself with your competitors, you will find your education, experience, age, property, and friends give you even advantage with the first third; but your absence during their presence is a sad offset, and it might require two years of patient toil, mostly among the poor, to redeem yourself from the disadvantage. Had I the question to settle, I should resolve it into the estimate of my health and the health of my family, and, if convinced that the city were most congenial to my health, and to the health and constitution and life of my wife and children, I would remove to the city; and if convinced that the country were most congenial to these great leading objects, I would remain in the country. Should you come among us, I shall be happy in tendering to you the courtesies of good neighborhood, but my own influence is too limited to proffer any encouragement of particular aid.

To Mrs. Homans be pleased to tender my best regards, and accept the assurance of esteem from your obliged and obedient servant,

George C. Shattuck.

A Specimen of an Orbital Tumor was then presented by DR. H. W. WILLIAMS. The eyesight had been lost for two years. The tumor extended through the cornea into the surrounding tissues

A Case of Recovery from Septicæmia following Abortion was reported by DR. J. R. CHADWICK as follows: "Mrs. R. came to me when she was between four and five months along in her second pregnancy, with the story that she had had a sudden severe hæmorrhage a week previously. Six days later she came to my dispensary, saying that she had miscarried in the preceding night. On examination the os admitted two fingers, which readily recognized the presence of the placenta. The patient was put to bed and plied with ergot; there was no loss of blood, but after thirty-six hours a dark, offensive discharge began to come away. On the third day the pulse went up to 96, the tongue was coated, the patient was feverish. The abdomen was not tympanitic, or distended; neither it nor the uterus was the least tender. I concluded that there was absorption of septic matter from the uterus, and deemed it imperative to remove the placenta without further delay. Accordingly on March 5th, with the assistance of Dr. Bixby, I sought to effect this object, with only partial success, for, though the os was widely open, the placenta was so firmly adherent that no force would detach it. My forceps every time brought out their fill of placental tissues, but the mass of the placenta remained. Having by this means removed one half to three fourths of the mass, I was forced to desist, from the failure of the patient's pulse owing to loss of blood. To check further oozing, I injected liquor ferri perchloridi, one part to four of water. This was effectual. On the next day the patient was quite easy till night, when she suddenly had a well-marked chill, followed by headache, malaise, and a pulse of 140. There was still no tenderness or distention of the abdominal walls, nor were there any other symptoms of peritonitis or metritis.

"I consequently diagnosticated incipient septicæmia due to absorption of the blood-clots formed by the iron, and the placental fragments. I immediately washed out the cavity of the uterus with a solution of permanganate of potash. This was repeated every night and morning for a week, when the discharges ceased to be offensive. On the day following that on which she had the first chill, the patient experienced at one time a sensation of chilliness. The pulse gradually fell; the headache slowly subsided, and the retained fragments of the placenta were subsequently discharged. A perfect recovery was ultimately secured."

It was Dr. Chadwick's opinion that very many of the deaths that occurred after the injection of perchloride of iron into the uterine cavity, during the puerperal period, were attributable to the absorption of the decomposing clots formed by the iron. He believed that the mortality might be greatly reduced by washing out the cavity, as was done in this case, with a disinfectant solution.

A Case of Hair-Pin in the Male Urethra was reported by DR. S. H. DURGIN. J. S., male, aged twenty years, was admitted to hospital at Deer Island institutions January 31, 1872, complaining of a hair-pin in his penis, which he said had been put there three days before by malicious persons. On exami-

nation the pin was found in the urethra, the forked end outward and the round end back near the bladder. One prong of the pin could be distinctly felt through the perinæum. The general disturbance was not great, the pulse being only 80, and the tongue moist and comparatively clear.

Locally there was very slight tenderness and swelling in the perinæum, moderate pain, except in walking, and little show of blood at the meatus.

The patient was placed under ether, the thighs flexed as in position for lithotomy, a grooved director passed down the urethra beyond the points of the pin, the scrotum drawn forward, and an opening three eighths of an inch in length made through the perinæum upon the director. One point of the pin was at once exposed through this opening, but the other, from compression of the two points, was so imbedded in the tender and congested mucous membrane that much time and patience were required in securing it without injury to the parts.

The pin extracted measured three inches in length, and the points were separated half an inch. The opening was closed by two silk sutures, and a gum catheter left in the bladder for three days, allowing the urine to pass every three or four hours. No unfavorable symptom arose, and the patient was discharged well in ten days. The patient's story as to the introduction of the pin by other persons was not considered wholly trustworthy.

The case is interesting only in adding an ugly and an uncommon specimen to the long list of foreign bodies which have been, from time to time, extracted from the urethra or vagina, where they have been put generally, Dr. Durgin thinks, without the aid of any second person.

SEWILL'S DENTAL ANATOMY AND SURGERY.[1]

This is a book which, we are inclined to think, will be very useful to the student of dentistry. It is certainly proper that he should know more of the histology of the teeth than is given here, but we suppose that an exhaustive account of it formed no part of the plan of the work. The development also is not as fully treated as it might be, but is good as far as it goes. After describing the normal arrangement of the teeth, the author takes up irregularities, and we look with interest for his views on the question of extracting teeth "to make room." We are happy to see that he considers the extraction of an incisor or canine "rarely justifiable." If the tooth be sound we should say "never," but perhaps its being diseased is what the author has in mind, as presently he implies that a diseased one may be removed even if not so much in the way as a sound one. The comparative liability of a given tooth to caries is of interest in this connection. The author states that the first molars are the most liable to decay, next the second molars, then the second and first bicuspids, in the order given. The canines and incisors are apparently of stronger constitution, or perhaps are less exposed. A very curious fact is the much greater liability to disease of the front upper teeth than of the front

[1] *The Student's Guide to Dental Anatomy and Surgery.* By Henry Sewill. Philadelphia: Lindsay and Blakiston. 1876.

lower ones. It is very marked in front, and persists, though in a less degree, as far round as the molars. In the first two molars the reverse is the case, but the lower wisdom tooth is more often decayed than the upper, owing probably to want of room. The surgical instruction, we are glad to see, is confined almost entirely to the teeth themselves, for diseases of the jaw are in the province of the surgeon.

GORE'S WEST AFRICAN CAMPAIGN.[1]

THIS is a very interesting account, by an active participant, of the medical aspects of Sir Garnet Wolseley's expedition against the Ashantees in 1873–74. The fighting was not very severe, and the book contains no surgical contributions of importance, but the climate was very bad. The chief diseases of the coast appear to be remittent and intermittent fevers, and a certain amount of rheumatism. Diarrhœa and dysentery are not prevalent near the coast, but appear as troops proceed inland, owing, no doubt, in part to the increase of exposure. The following figures show the danger attending active operations. In 1859, during peace, the mortality was twenty-five per thousand; 1863 was occupied in preliminary preparations in the bush, and the ratio rose to thirty-eight; 1864 saw active operations in the bush, and gave a mortality of sixty per thousand. The greatest sanitary precautions were taken in the campaign of 1873–74, with very gratifying results, for the details of which we refer the reader to the book. The part that seems to us of greatest interest is that in which the author gives the results of his experience in the matter of food and drink. The soldiers appear to have felt a great craving for fresh meat, which was gratified as much as possible by driving live stock on the march. Australian preserved meat was not liked, but it appears that a great deal depended on the cooks, some of whom made it palatable. Soup, on the other hand, was a great favorite with the men, as were also French preserved vegetables. Liebig's essence proved of great value. Dr. Gore speaks very highly of cocoa as an agreeable and nourishing drink, far superior in most cases to tea, which is simply a stimulant, and, when taken in large quantities, by no means a harmless one. The chapter on alcohol is excellent. The author quotes with approval Dr. Sutherland's axiom, "Wine is a good friend, but a bad enemy." It would appear from the book that strong, healthy men, well fed and taken care of, can perform arduous and long-continued labor perfectly well without any alcohol whatever, and it appears also that in the case of weakly, wounded, or ill-fed men, it is of the greatest value. During a march in the sun it is absolutely injurious, but when the final halt is made it is important that some stimulant should be given at once. If hot tea or coffee can be made ready in advance, so much the better; if it cannot, a spirit ration should be issued. Dr. Gore, after considering the various circumstances, the exertion, the irregular life, the hot, damp, and malarious climate, thinks it would be "unwise to deny the use of alcohol in *moderate doses and under*

[1] *A Contribution to the Medical History of our West African Campaigns.* By SURGEON MAJOR ALBERT A. GORE, M. D. London: Baillière, Tindall, and Cox. 1876.

proper restrictions," during active operations. In the treatment of malarial affections he considers it of great value.

Dr. Gore has done his work well, and we do not believe that his book is the least important result of the campaign.

THE END OF THE POMEROY CASE.

We are more grieved than surprised at the escape from justice of the murderer Pomeroy, whose sentence has been commuted to imprisonment for life. The sentimentalists have won the day, and the pleas of parents that their infants should be protected from torture and mutilation have been set aside. We need not review the disgusting record of Pomeroy's crimes; suffice it to recall that he has murdered two children, and tortured and shockingly mutilated several others. These crimes were committed coolly and deliberately, usually after full premeditation, and steps were taken to conceal them. There was no sudden or irresistible impulse, no delusion, to account for these acts, which sprang solely from a devilish lust for the sight of suffering. That such an impulse is morbid must be admitted, but there is not a shadow of evidence that the criminal was not able to resist it. The sole plea is the very atrocity of the crime; to accept it is to stultify justice.

We are told that the criminal if not punished is at least in safe keeping for the rest of his life. We do not believe it. Statistics have shown that the average duration of life sentences is a little over seven years, and we cannot hope that our philanthropists will neglect a case so likely to appeal to their tender sympathies. In ten or twenty years at most the committee on pardons will be told that this most interesting man, whose conduct in prison has been exemplary, committed certain little irregularities when under delusions dependent on his age and state of health, that his impulses have since changed, and that it were cruelty to deprive him longer of the light of the blessed sun and the breath of heaven's breezes. The matter will be managed warily and quietly, no opportunity for protest will be offered, and Mr. Jesse Pomeroy will be a free man. His friends will take care to convey him to some distant place, for we hope and believe that he will never be safe in Boston even at noonday, and thus new and unsuspecting victims will be exposed to him. That such a nature as his can be reformed is hardly possible. We hope our prophecy may not be fulfilled, but those who live will see.

MEDICAL NOTES.

— In a paper by Dr. Halton on excoriations of the os and cervix uteri, published in *The Dublin Journal of Medical Science*, June, 1876, the writer calls attention to a symptom which he has rarely found to be absent in the affection under consideration. When this symptom occurs in a *married* woman who has borne children or has had an abortion or miscarriage, it should lead to a uterine examination, if the gastric or head affections refuse to yield to ordinary treatment. The sign in question is a numbness of one limb, most

commonly on the left side, usually commencing in the thigh and running down the leg. It is occasionally, though rarely, met with in the arm. It is a very marked and unmistakable symptom when present, some patients declaring that they cannot feel that they are touching the limb when they put their hands on it; in other cases it is accompanied by a tingling or stinging sensation, as of nettles. There is also to be very frequently found distinct tenderness on pressure in the ovarian region of the affected side. If these symptoms are present, an examination will commonly reveal excoriation of the os and cervix. It is further to be remarked, as bearing on treatment, that the diminution and disappearance of these symptoms indicate the approach of healthy action and consequent cure, even before the local affection shows much alteration for the better.

—The Medical Register for New England is in press, and will *probably* be published in October. Every possible opportunity will be offered physicians and others to make additions or changes in their records, but it is important that they should be sent in at once.

—The spiritus ætheris dulcis as a solvent for quinine is recommended by Isaac Smith, Jr., M. D., in the *New York Medical Journal.* He says that one ounce of the solvent will dissolve two drachms of quinine, giving a transparent solution.

LETTER FROM NEW YORK.

Messrs. Editors, — The intense heat of the past four weeks has been accompanied by a very high rate of mortality, especially among the children who live in tenement-houses. Our hot weather began about the first of July, and continued with scarcely any diminution until the last week of the month. The highest temperature during the week ending July 8th was 95°, which occurred at five P. M. on Saturday the 8th. The lowest was 69°, on Friday the 7th at five A. M., giving a mean temperature of 83.1° for the week. During this week there were 858 deaths reported from all causes, against 640 the week before, and 567 for the corresponding week of last year. Of these 858 deaths 541 occurred among children under five years of age, and of these 313 were from diarrhœal diseases. Nineteen deaths were reported from the direct effects of solar heat. The highest degree of temperature during the week ending July 15th occurred on Sunday, the 9th, at four P. M., when it reached 98°. The lowest was on the 10th, at five A. M., when it fell to 71°, giving a mean of 83.9°. The number of deaths reported was 1298 against 774 for the corresponding week of 1875. Of these 862 occurred among children under five years of age, and of these again 596 were due to diarrhœal disease. One hundred and five deaths occurred from sunstroke. The greatest mortality for any one day was on the 9th of July, when the thermometer reached 98° Fahrenheit, and the number of deaths 291, 193 occurring among children. For the week ending July 22d the highest degree of temperature occurred Wednesday, July 19th, at five P. M., when it reached 94°. The lowest was at six A. M. on Sunday, the 22d, when it fell to 69°, giving a mean of 81.9°. The mortality for this week was 997, against 934 for the corresponding week of last year. Six hundred and sixty deaths occurred among children under five years of age, and

of these 433 were due to diarrhœal trouble. There were 46 fatal cases of sunstroke. During the week ending July 29th there occurred a great change in the temperature, and with it a diminution in the rate of mortality. Seven hundred and forty-four deaths were reported, of which 462 occurred among children under five years of age, and most of these were from diarrhœal disease. There were no fatal cases of sunstroke. The mortality for the last week in July, 1875, was 786.

The greatest mortality for any one week during the past month occurred during the week ending July 15th, when it reached 1298, and this is the highest mortality reported in this city since the week ending July 6, 1872, when the mean temperature was 83.97°, and the number of deaths reported was 1569. The total mortality for the month of July was 3895. Of this number 2525 occurred among children under five years of age, and the number of fatal cases of sunstroke was 170. About 99 per centum of the deaths among children occurred among those living in tenement-houses. In order to afford relief to this class, the board of health, at their meeting on the 18th, appointed fifty physicians to act as assistant sanitary inspectors, to visit the tenement-houses and to care for cases of cholera infantum and other diseases arising from the extreme hot weather and not under medical attendance. In order to carry out this plan, that portion of the city occupied by tenement-houses was divided into fifty districts, and a physician assigned to each district to make daily visits. This plan was found to work well, and much relief was afforded to the children of the poor. During this hot period the Floating Hospital of St. John's Guild has made frequent excursions, and has afforded the poor much relief. On August 2d, 1193 sick children were taken out on the bay, that being the fifteenth excursion this season.

Messrs. William Wood and Company announce that they will begin the publication of the transactions of the Pathological Society of New York. The volume will be arranged somewhat after the plan adopted by the Pathological Society of London. The society was founded in 1844, and this will be the first attempt to present its transactions in a compact form to the profession, although partial reports of its proceedings have been published from time to time in the medical journals of the city. Since its foundation two meetings have been held each month, and the records are full and have been well kept, and there is no reason why the yearly volume of reports, which it is intended shall be issued, should not prove as valuable as the reports of the London society. The members of the society have almost as large a field to draw from as those of the London society, and if the transactions fail to equal the reports of the latter in fullness of detail and in the value of the cases reported, it will not be for the want of materials. The first volume will consist of a history of the society and a list of its officers since 1844, a list of specimens and reports presented in 1875, a select list of those cases of a similar character presented since 1844, and finally a full report of the transactions for 1875. The first volume will be issued in the fall. Dr. J. C. Peters, the editor of the society, will have supervision of it. If the above plan is faithfully carried out, a valuable and interesting book may be expected.

It is now about one year since the school for nurses was established at Charity

Hospital, and I understand that it has proved successful far beyond the expectation of its founders. There are now forty-four pupils attached to the training school. All the wards in the hospital are provided with nurses from the school, except the three male venereal wards. I lately made a visit to the hospital, and was struck with the neat and orderly appearance of the wards, but the greatest change is found in the improved *morale* of the institution. The school at Charity differs from that at Bellevue in that the former is under the supervision of the chief of staff, while the latter is under the direction of an educated and trained nurse. While those connected with the former live at the hospital, those connected with the latter have a "home" near Bellevue. That at Charity is intimately connected with the hospital, while the Bellevue training school is an organization entirely independent of the hospital, its managers having no connection with that institution. The training which nurses get at the Bellevue school is more thorough, I should judge, than that at Charity. The course of instruction is the same in both schools, two years. Under the old plan of employing nurses, the patients at the public hospitals were placed under the charge of ignorant and, too often, drunken nurses. The well-being of the sick was, to many of them, a secondary consideration. To furnish to these patients good nursing was one of the ends aimed at in establishing these schools, but they have a grander aim in view: to bring nursing up to a profession, and to give to the country nurses who have been thoroughly trained in large hospitals, and who are perfectly competent to take charge of any case. And above all things they are taught strictly to carry out every instruction of the physician having charge of the case.

The ladies who have worked for the success of training schools for nurses are to be congratulated upon the results they have obtained, and to them not only the medical profession but the public are under great obligation for their persistent efforts to educate women to fill the positions of competent and reliable nurses.

THE ANNUAL MEETING OF THE BRITISH MEDICAL ASSOCIATION.

Messrs. Editors, — With Drs. Brown-Séquard, Marion Sims, and Lane, of San Francisco, your correspondent was present at the meeting of the British Medical Association held last week at Sheffield. A brief *résumé* of its proceedings, aside from the detailed official report that will appear in the British journals, may interest your readers.

Nominally the forty-fourth, this year's session was in reality but the twentieth annual meeting of the "British" Medical Association, as prior to 1856 its title and its aims were alike "Provincial." At present, however, so complete and harmonious is the union that has been effected between metropolitan and country interests, the old sectional jealousies have been in great measure allayed. From the original roll of three hundred members the number has increased to seven thousand, and the receipts for the year past have amounted to £10,000. Of this vast sum no less than £9757 were expended during the year, the chief part of the current outlay being for the publication of the journal

of the association, *The British Medical*, and in "grants" for the encouragement of scientific research.

The late meeting was a large and successful one. Brighton had at first been selected, but the death of the president-elect, Sir Cordy Burrows, of that city, rendering a change desirable, the profession of Sheffield claimed the privilege of receiving the association, and Dr. Martin de Bartolomé, an Edinburgh graduate and a distinguished member of the staff of the Sheffield Infirmary, was appointed to the vacant chair. It was a source of regret to all that Sir Robert Christison, the retiring president, was prevented by advancing years from attending the meeting, and there were many of his old pupils, besides your correspondent, in whom his fine personal presence, his courteous and dignified bearing, his impressive delivery, so like in all these respects to our own Professor Gross, would have kindled a host of pleasant recollections.

The presidential address was devoted in great measure to a history of the various trades and handicrafts of Sheffield, and served as a fitting introduction to a series of valuable papers, subsequently read before the section of medicine, upon Lung Diseases resulting from Inhaled Irritants. These were severally by Dr. J. C. Hall, of the Sheffield Public Hospital, on the Effects of Sheffield Trades upon its Workmen; by Dr. Purdon, on the Injurious Effects produced upon the Lungs by Flax-Dust; by Dr. Beveridge, of Aberdeen, on the Occurrence of Phthisis in Granite-Masons; and by Dr. Arlidge, of Newcastle, on Potters' Disease from Inhalation. To Dr. Chadwick, formerly of Leeds and now of Tunbridge Wells, president of the section and an ex-president of the association, is due the credit of having elicited the contemporaneous presentation of so many papers bearing upon this important subject. Dr. Chadwick's own researches into the special diseases of Sheffield, as he stated in his address to the section of medicine, have dated back to more than thirty years ago, and initiated from an inquiry then made, in conjunction with Drs. J. and W. Thompson and Sir James Simpson, into the "colliers' black spit" (spurious melanosis), at that time supposed to occur only in Scotland.

The general address in medicine was by Dr. Edward H. Sieveking, of London, Physician Extraordinary to the Queen. Dr. Sieveking traced the history of the profession in Great Britain, of the circumstances which led to the formation of the association, and of the varied and important work that it had already accomplished. He urged the establishment of a new and especially national university, under the direction and control of the association. His remarks were received with loud applause, but from comments that were subsequently made by members in private, it would seem that the difficulties in the way of the realization of Dr. Sieveking's proposal were as great as those attending the establishment of a national university at home, that has more than once been advocated before the American Medical Association. In Great Britain there are already a dozen or fifteen powerful bodies of the kind, and it is not likely they would welcome a new-comer whose avowed object would be to supplant them all.

Mr. William F. Favell, surgeon to the Sheffield Infirmary, delivered the general address in surgery. It was in great measure a comparison of present with past methods of practice, and was illustrated by typical cases from his

own experience. Mr. Favell drew especial attention to a "most ingenious and important novelty in surgery," the union by forced coaptation of divided nerves, whose suggestion and practical development was due to Mr. Wheelhouse, of Leeds, then present at the meeting. "If," said Mr. Favell, "in the case of a limb left paralyzed by division of an important nerve, we can afterwards cut down upon, reset, and reunite such nerve so as to restore power and sensibility to the parts supplied by it, at no great risk, much has been gained; and in cases of extensive wound or laceration, involving important nerve trunks, these records (of several cases now reported) raise the question whether it is not better not to be simply content with ligaturing bleeding vessels, and leave the nerve trunk to the chance of assuming its original position by carefully and accurately closing the wound, but to insure the coaptation of its divided ends by the careful introduction of sutures."

It had been announced that Professor Brown-Séquard would next read an address in general meeting upon the Relation of Affections of the Brain to Pulmonary Disease, and the communication was awaited with intense interest. Mr. Favell's address had, however, occupied so long a time that Dr. Brown-Séquard was able to present but a portion of the paper that he had prepared. He was voted a cordial expression of thanks, and the address will hereafter be printed in full.

The various sections of medicine, surgery, public health, and obstetric medicine were overcrowded with work, no less than eighty-one separate papers having been offered. The opening addresses by the presidents of each section were carefully drawn and instructive. To Dr. Chadwick's address in the section of medicine allusion has already been made. Mr. Jonathan Hutchinson, of London, presided over the section of surgery, and it was easy to see, both at its opening and subsequently at the annual dinner, the influence that this gentleman wields, and the great favor with which any suggestion that he makes is received. Mr. Hutchinson dwelt with emphasis upon the importance of surgical note-taking, and proved that by an accurate heading one may often dispense with almost the whole labor of writing out the details of the case. The section of public health was under the direction of Dr. Russell, of Glasgow, who detailed the operations of the so-called Improvement Trust in that city. This paper was followed by a series of great value to social scientists. Mr. Rogers, of London, formerly President of the Poor-Law Medical Officers Association, described Chaos, as exemplified in Central and Local Sanitary Administration; Dr. Griffiths, the Sheffield Medical Officer of Health, indicated certain Impediments in the Way of Sanitary Progress; Dr. Thompson, of Leamington, discussed the Relations of General Medical Practitioners to the Sanitary Authority; Dr. Diver, of Kenley, the desirability and importance of a more complete State Recognition of Medicine; Mr. Fox, of Cockermouth, called attention to the different methods of Sewer Ventilation; Mr. Alford, of London, advocated Legislative Restrictions for Confirmed Drunkards, as had already been done in general session by Dr. Alfred Carpenter, of Croydon; and Dr. Fox, the Essex Medical Health Officer, showed how frequent and dangerous was the Dissemination of Communicable Diseases by Trades-People and Others, who could be easily reached by the law.

The meetings of the section of obstetric medicine, including, as this does, gynæcology, were very fully attended, — by probably a larger number of members, as the presiding officer remarked, than all the other sections together, — for the profession of Great Britain, like our own, are now thoroughly alive to the advances everywhere making in this department, and it had besides been announced that a paper would be read by our truly representative American, here even more appreciated than at home, Dr. Marion Sims. The presidential address of the section was delivered by Dr. Lambe Atthill, of Dublin, who, after mentioning that many of the now clearly-recognized diseases of women were overlooked during the studentship of most of the older physicians living, said that for a knowledge of the pathology and treatment of these affections the profession were indebted, first and foremost, to the labors and discoveries of Sir James Simpson. Dr. Athill was followed by Dr. Marion Sims who indorsed all that had been said concerning Simpson as the father of modern gynæcology, and then fairly astounded every one present, your correspondent not excepted, by a description of his new and most magnificent operation for the "*cure*," though but for a few months or years, of *uterine cancer*. The paper was illustrated by the blackboard and by detail of numerous cases, and elicited warm commendation from men of the highest eminence, such as Drs. Henry Bennet and Alfred Wiltshire, of London. (Your correspondent may add that before leaving Sheffield, he was permitted, together with Dr. Kidd, of Dublin, President of the Royal College of Surgeons of Ireland, the privilege of seeing Dr. Sims operate upon a typical case of cervical epithelioma, a patient of Dr. Watson, of Peniston, near Sheffield, and he can truly say, after having repeatedly seen Dr. Sims operate, for vesico-vaginal fistula, etc., during a period extending many years back, that for dexterity, self-possession, plain common sense, and good judgment, he had conceived of nothing equaling what he beheld on the present occasion. Not only was the cervix up to the inner sphincter removed by scissors and knife after the outgrowth had been scooped away, but the whole ring of the sphincter itself, and necessarily a portion of the walls of the cavity, the fraction remaining, as ascertained with the sound by Dr. Kidd, measuring but one inch and a half, while at first the organ, excluding the whole of the cauliflower outgrowth, was fully, if not more than, the normal size. In this connection it may be mentioned, and in Boston the remark will be sure to be appreciated, that Dr. Sims, while considering chloroform to be better in midwifery cases, is strongly in favor of ether for all surgical operations, and stated this fact plainly to the association.)

The sketch thus rendered of the doings of the British association at Sheffield is but meagre and unsatisfactory. To have spoken of the labors of the council alone, as reported by its chairman, Dr. Falconer, of Bath, would have occupied much space. Several of the measures by it recommended, as that in the registration of disease the return should in the first instance be made by the person in charge of the case or the householder, and not by the medical attendant, were considered in general session. This was also the case with the cruelty to animals parliamentary bill, a report upon which was read by Mr. Ernest Hart, of London, while remarks eloquently vindicating the position of the medical profession with regard to vivisection were made at the annual dinner by the venerable Mr. Roebuck, M. P. Enough has been said,

however, to show how important and interesting the session has been, and how extensive the field that it has covered.

Great interest is everywhere expressed abroad regarding the coming International Medical Congress at Philadelphia. Mr. Lister, of this city, so widely known as Syme's favorite pupil, and as himself the founder of "antiseptic surgery," has already started to attend the meeting. Dr. Alexander Simpson, Sir James's successor in the midwifery chair, will also at once leave for the same purpose, landing at Boston.

HORATIO R. STORER, M. D.

EDINBURGH, *August* 8, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING AUGUST 26, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	572	28.03	29.35
Philadelphia	825,594	367	23.11	22.24
Brooklyn .	506,223	274	28.14	24.92
Chicago . .	420,000	264	32.69	19.75
Boston . .	352,758	180	26.53	26 20
Providence	101,500	40	20.49	19.02
Worcester .	51,087	24	24.43	20.91
Lowell . .	51,639			20 55
Cambridge	49,670	21	21.98	23.31
Fall River	50,372	24	24.77	23.99
Lawrence .	36,240	26	37.14	25.96
Lynn . .	33,548	21	32.55	19.23
Springfield	32,000	12	19.50	20.93
Salem . .	26,344	12	23.69	22 92

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — In reply to the strictures of H. R. R.[1] on the case of protracted jaundice, etc., I would say that I cannot regard it as so simple as he does.

The hepatic symptoms had existed for five months, with frequent exacerbations of considerable severity, before the occurrence of a single chill. There had been no return of intermittent fever for twelve years, and no new exposure in that interval to malarial influences. The patient entered the hospital for the pain and jaundice and the consequent symptoms. These were so severe as to make life at times a burden to him. He was by no means in the usual condition of intermittent-fever patients in the intervals between the chills.

The first chill occurred nine days after entrance; the second, twelve days later, at a different hour of the day; the third, the next morning early, instead of the afternoon; the fourth, the next morning. As soon as the chills assumed the regularity of tertian, quinine was administered.

As was stated in the report of the case under discussion, there was no decided alleviation of the hepatic symptoms until the use of the choleate of soda was commenced. I suppose it is fair to conclude that the principal agent in checking the chills was the sulphate of quinine. There certainly seemed reason to fear, up to the last, that they were due to some obscure disease, perhaps abscess, going on in the liver, of which they were a symptom. Nor am I now satisfied that they were not the result of the hepatic disturbance. The improvement under the continued use of the choleate of soda went on after the patient left the hospital, and he writes me that he has gained twenty-three pounds in weight, though still quite weak. During a short interval when he was without medicine there was a slight recurrence of the hepatic symptoms. Respectfully yours, S. L. A.

[1] JOURNAL, August 17, 1876.

First Annual Meeting of the American Gynæcological Society. — The first meeting of this society will take place in the Academy of Music, New York, September 13, 14, and 15, 1876. The following papers will be read to the society: —

September 13th. — 1. Incision of the Cervix Uteri. By Dr. T. A. Emmett. Discussion by Drs. J. M. Sims, E. R. Peaslee, T. G. Thomas, and other.

2. Cicatrices of the Cervix Uteri. By Dr. A. J. C. Skene.

3. Report of a Case of Abdominal Pregnancy treated by Gastrotomy. By Dr. T. G. Thomas.

4. Battey's Operation for Extirpation of the Ovaries. By Dr. R. Battey.

5. A paper sent by Dr. J. Matthews Duncan, of Edinburgh.

6. Viburnum Prunifolium; its Uses in the Treatment of the Diseases of Women. By Dr. E. W. Jenks.

7. A Case of Abnormal Menstruation. By Dr. T. Parvin.

September 14th. — 8. Annual Address of the President.

9. A paper by Dr. Robert Barnes, of London.

10. Spontaneous and Artificial Disintegration of Fibrous Tumors of the Uterus. By Dr. W. H. Byford.

11. Pneumatic Self-Replacement in Dislocations of the Gravid and Non-Gravid Uterus. By Dr. H. F. Campbell.

12. Latent Gonorrhœa, especially with regard to its Influence on Fertility in Women. By Dr. E. Noeggerath.

13. Hydrate of Chloral in Obstetric Practice. By Dr. W. L. Richardson.

14. A Case of Labor complicated with four large Uterine Fibroids and Placenta Prævia. By Dr. J. R. Chadwick.

September 15th. — 15. What is the Best Treatment for Acute Lacerations of the Female Perinæum, and for Lesions of the Recto-Vaginal Septum. By Dr. W. Goodell.

16. Paper sent by Mr. Lawson Tait, of Birmingham, England.

17. Cases of Cystic Tumors of the Pelvis. By Dr. G. H. Bixby.

18. A Menstrual Hystero-Neurosis of the Stomach. By Dr. G. J. Engelmann.

19. Masturbation in Women, with a Report of Seventeen Cases treated with Bromide of Potash. By Dr. J. R. Chadwick.

20. What is the History of Calculi formed in the Bladder after Operations for Vesico-Vaginal Fistulæ? By Dr. H. F. Campbell.

Dr. William E. Boardman has been appointed surgeon to patients with diseases peculiar to women, at the Carney Hospital.

Appointments in the Medical Staff, M. V. M. — August 14, 1876, First Battalion of Cavalry, Surgeon Robert Amory, of Brookline.

August 25, 1876, Second Battalion of Infantry, Surgeon David Clark, of Springfield. Before the reorganization Dr. Clark was Assistant Surgeon of the late Second Regiment.

August 15, 1876, Surgeon Robert Amory, First Battalion of Cavalry, to be Medical Director of the Second Brigade, with the rank of lieutenant-colonel.

August 23, 1876, Surgeon John L. Hildreth, Fourth Battalion of Infantry, to be Medical Director of the First Brigade, with the rank of lieutenant-colonel.

The Board of Medical Officers established by General Orders No. 23, Series of 1874, will hereafter be composed of five members, and the following-named officers are announced as detailed for service with it: —

Colonel Joshua B. Treadwell, Assistant Surgeon-General, President; Lieutenant-Colonel Robert Amory, Medical Director, Second Brigade; Lieutenant-Colonel John L. Hildreth, Medical Director, First Brigade; Major Edward J. Forster, Surgeon, Fifth Regiment Infantry; Major David Dana, Surgeon, First Battery Light Artillery.

Books and Pamphlets Received. — The Theory and Practice of Medicine. By Frederick T. Roberts, M. D. Second American from last London Edition. 1876.

On Tracheotomy, especially in relation to Diseases of the Larynx and Trachea. By W. Pugin Thornton. 1876.

The Preventive Treatment of Calculous Disease and the Use of Solvent Remedies. By Sir Henry Thompson, F. R. C. S. Second Edition. 1876.

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ABSTRACT OF THE ADDRESS ON PUBLIC HYGIENE

DELIVERED BEFORE THE INTERNATIONAL MEDICAL CONGRESS AT PHILADELPHIA, SEPTEMBER 5, 1876.

BY HENRY I. BOWDITCH, M. D.

As a measure of vital importance to the well-being of any community, and, as such, worthy to be cheerfully and amply sustained by great cities and states, public hygiene, as we now understand that term, has till within a very short time been wofully neglected, save when, under the stimulus of some great and terrible epidemic, frantic, perhaps, but temporary efforts have been made to stay the plague by hygienic or other means. Of late, however, a new and better era seems opening to our view, and State Preventive Medicine affords us higher hopes for all coming time. To this last, this noblest phase of public hygiene, its very late appearance in this century, its gradual evolution out of the dogmatism and skepticism of the past, its present status, our duties relative thereto, and our golden hopes for the future, I crave your candid consideration during the brief hour I shall have the honor of addressing you. If, at the termination of my remarks, our foreign associates feel that I have given them but little information, and my countrymen find that I have said but little in praise of my country, one and all of you, I trust, will generously allow me the credit of having endeavored at least to speak the exact truth.

The past century in this country easily divides itself into three unequal epochs: first, from 1776 to 1832, the era of theory and dogmatism; second, from 1832 to 1869, or that of strict observation and of bold and often reckless skepticism; third, from 1869 to 1876, which is destined to continue and progress while the nation itself lives, the noblest and most beneficent of all, in which the state joins with the medical profession and the laity with the object of preventing disease.

The first epoch was that of medical system-making, was filled with an overweening confidence in our art, with little or no faith in the *vis medicatrix naturæ*. The influences which governed the opinions of medical men, and through them the world, in all that relates to sanitary matters during this period and the previous century, may be briefly

sketched as follows: The illustrious Boerhaave began to enunciate his doctrines of disease at Leyden, in 1701. With him all disease was in the fluids of the system. His doctrines held sway in America until about 1765. Following closely after him came Hoffman, Cullen, Brown, Darwin, each with his own peculiar system. Our ingenious and renowned countryman, Benjamin Rush, proclaimed his own ideas in 1790, namely, that a convulsive motion of the arteries is the proximate cause of all fever, and that there is but one fever, however different the causes may be. He was one of the most noteworthy men this century has produced, and has been called by one of his admirers the American Sydenham. During the twenty-three years of his professorship, after having been medical director of the middle department of the continental army, he energetically and ably defended his system, as he had previously upheld Cullen's. Like his predecessor he was essentially a medical system-maker. He believed fully in heroic measures and rather scoffed at nature.

But Rush's theories and dogmatism were destined to fall under the influence of the fascinating theories of Broussais, which spread widely in America, but less so in New England, which had been trained more to close observation under the great masters in medicine, Dr. Holyoke, Dr. James Jackson, and others, than in other parts of the country. In or about 1832 his system began to fall in America, as it had been previously falling in Europe. With him our first epoch terminates. The whole tenor of it was not suited to the growth of anything like what we understand by state preventive medicine.

The second epoch, or that of observation and accurate recording of facts, and subsequent analysis of them, with an extreme confidence in nature's power of curing disease, a corresponding skepticism in regard to the use of drugs, and finally dim presages of preventive medicine, presents characteristics precisely the reverse of the first. Louis and his numerical method stand prominent in it. The epoch in America began when Dr. Gerhard, of Philadelphia, and James Jackson, of Boston, returned to these two cities and commenced their honorable careers, full of the new ideas, and enthusiastic defenders and expounders of them. Their influence extended gradually over the whole country. Louis's doctrines, though vehemently opposed by some who had grown old under the previous epoch, were received by most young men with joy. Philosophical minds among the elder ones were charmed with the accuracy observable in Louis's numerical method, under the direct or indirect influence of which — the guiding influence of the present time as Dr. Guy considers it — an immense number of independent observers and workers have been educated in this country and in Europe.

In addition to the specific disciples of Louis, there were three others all men of great influence, who by their writings were powerful leader

in this epoch. I allude to Jacob Bigelow and Elisha Bartlett of America, and John Forbes of England. All but one of this trio are dead. Dr. Bigelow entered his eighty-ninth year last February. His life nearly spans the century, and closely unites the first and second epochs. After a most honorable and successful life as a physician and professor of the Harvard Medical School, he has been for years totally blind, and hopelessly unable to move from his bed for more than eighteen months. His influence upon this second epoch was diametrically opposed to Rush's during the first. He fully sustained the principles and methods advocated by Louis. By his writings and teachings he had immense influence over New England; directly and indirectly over the medical community of the whole country. While Bigelow was thus sapping all faith in polypharmacy, Dr. John Forbes published in the chief medical journal of that day one of the boldest avowals of the same creed, which has stood the test of time as one of the noblest protests against the drugging of the day, and an eloquent defense of the power of nature in curing disease. Polypharmacy then and there received its most deadly blow; and such a blow was needed before state preventive medicine could become possible. Dr. Elisha Bartlett was one of the most philosophical medical men America has produced during the century, and his heart was devoted to medical reform. Though not educated under Louis, he thoroughly appreciated his methods and his writings, and proclaimed them as the dawn of a new and great era in the history of medicine. From the many chairs which he occupied as professor in different colleges, he was able to influence North, South, East, and West of our country.

Thus closes the list of men whom I deem most prominent in carrying forward the ideas underlying this second epoch. They are at least eminent illustrations of the evolution of the medical thought of that time. Their mission was chiefly destructive, or constructive only in some degree. The general tendency of their writings, so far as they bore upon medical practice, was to utter skepticism, not only in regard to the manifest absurdities of our fathers, but likewise in reference to the good things suggested by them. Although they sometimes, as we have seen, hinted at prevention of disease, they did not dream of the union of the profession with the laity in urging the noble idea of state preventive medicine in its widest scope. Their skepticism, like all skepticism, was chiefly iconoclastic; we need faith in an idea before we can build it up in actual life. Such a faith we shall see breaking out in our third and last epoch, and to this I now call your attention. But first, let me say what I deem strictly true, and what I will sustain from my own professional experience of nearly half a century, that the medical profession as a body has hitherto taken very little interest in the ideas underlying state preventive medicine, and that we owe to the laity, rather than to the profession, the first and strongest efforts in its behalf.

The ruling idea of the third epoch, or that in which the medical profession is aided by the laity and the idea of state preventive medicine fairly inaugurated, as marked by the legal establishment of the first state board of health, is still in its infancy; but it shows by what it has already accomplished, trivial though that performance may seem at first glance to be, its inherently great nascent power. Its objects are vastly wider than those of any preceding epoch. Its destiny is as fixed as that of the steam-engine, the telegraph wire, the locomotive, or the use of anæsthesia. I cannot foresee a time when the ideas underlying this epoch will not be held in esteem and acted upon for the benefit of mankind. Among the men who stand prominent in their relations to it are two laymen. One of them, I fear, may be but little known to most of my hearers, or even to the people of his native State. I allude to Lemuel Shattuck, Esq., of Boston. The other is Edwin Chadwick, a barrister of London, for many years known and honored by every civilized nation as one of the ablest and most earnest of sanitarians. Mr. Shattuck in 1850 presented to the legislature of Massachusetts a most exhaustive state paper, entitled Report of the Sanitary Commission of Massachusetts, in which are laid down all the principal ideas and modes of action which underlie the present sanitary movements in that State, and, I think I may also add, in America.

We have been largely influenced too by the example of Europe, especially by Parent du Chatelet, Quetelet, Pettenkofer, and Virchow, great in every department of science or of state upon which he enters; and more still by England, who has far outstripped the other countries of the world by her unbounded pecuniary sacrifices and steady improvement in legislation for the improvement of the public health. I think I may say with perfect truth that the keenness of investigating power which has been applied to the discovery, removal, and prevention of whatever may be prejudicial to the public health, as brought out under the admirable direction of Mr. Simon, by his corps of trained inspectors, is wholly unequaled, and unprecedented, I suspect, in all past time.

The number of single laborers in the field is constantly augmenting; and in this connection should be mentioned the reports of our boards of health, the publications of the United States government, the library and museum in the Surgeon-General's department in Washington, the experience of our war, dreadful as it was, and the Sanitary and Christian commissions and associations of the North and South, through which money and food were distributed without stint for the sick and wounded, and by which the desire to save life and promote health was instilled into the minds and hearts of our people from Maine to Texas.

The four National Quarantine Conventions, checked by the war, contributed very much to lead the public mind to the ideas prevalent at the present time, and their real successor, the American Public

Health Association, has carried on the work. Of strictly professional institutions, the American Medical Association has from its organization in 1847, and especially of late, attempted to awaken an interest in public hygiene, through some of its members. It must be confessed, however, that, judging from the small numbers attending the section in hygiene, that subject seems to afford less interest than any other.

Finally, I may assert that during the past three or four years there has sprung up among the entire community a wide-spread thoughtfulness about the necessity and value of hygienic measures. In every State are there active and earnest laborers in this matter, and their number is daily increasing. It would be impossible, on this occasion, to name even a tithe of them. Some States, in their corporate capacity, have sustained these workers for the public good. But I regret to say that a large majority of the States and Territories of this Union are not sufficiently enlightened to appreciate the duty devolving on them to be careful of the health of their people.

I will now pass to a consideration of the present condition of state preventive medicine in the various States and Territories. Several months ago I sent circular letters of inquiry to two hundred and sixty-seven leading medical men known or supposed to be interested in public hygiene, representative men, in fact, residing in thirty-eight States, nine Territories, and the District of Columbia, which embrace an area of 3,603,884 square miles, and cover twenty-five degrees of latitude and fifty-seven of longitude, in the south lying almost in the tropics and at the north reaching close to the coldest inhabited portion of the globe. Replies have come from one hundred and sixty-seven, and are from every State and Territory except the Indian Territory, a reservation inhabited by Indians in various conditions from barbarism up to a low civilization.

An analysis of these replies gives the following results. First question: Does your State by its legislation show a due appreciation of the duty devolving upon a State to be careful of the health of its people?

The answers were as follows: thirty-four governments, no;[1] eight, yes;[1] four, indefinite;[2] two, no reply to this question.

Among the States which have failed to show this due appreciation of their duty are the great ones of New York and Pennsylvania, which have been the chief since colonial times and still hold that proud position. But let us who have traced the gradual evolution of the idea of state preventive medicine during the past century not wonder at this apparent neglect of public hygiene shown by the various States. Let us rather rejoice at even the small awakening of the public intellect and conscience on these matters evinced of late wherever a European civilization has any foothold.

[1] That is, correspondents unanimous.

[2] That is, correspondents not unanimous.

Second question: Is the State willing to expend money —

(*a.*) To support state or local boards of health?

(*b.*) To carry out scientific investigations as to the causes of disease?

(*c.*) To repress noxious or offensive trades?

(*d.*) To prevent adulteration of food?

(*e.*) To prevent the cattle diseases?

(*f.*) To carry on any other investigations tending to public health or to improve ill health?

The touchstone which tests the earnestness of an individual or a nation in reference to any subject is a willingness to spend money in furtherance of it. Tested by this talisman, how stands our country? Let us look at the various specifications.

To *a* the following answers were received: thirty-six, no; ten, yes; two, no reply.

Now I contend that the legal establishment of a state board of health is the very first step toward any definite sanitary organization of a State, and the replies show what very small advances have yet been made in this country. In those States, too, which have appropriated money, the sum is small in proportion to the objects aimed at.

To *b* the answers were as follows: thirty, no; twelve, yes; five, indefinite; one, no reply. The twelve replying affirmatively are Arizona, California, Colorado, District of Columbia, Georgia, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Rhode Island, and Wisconsin.

To *c* the following replies were made: twenty-six, no; fourteen, yes; seven, indefinite; one, no reply.

To *d* the answers are: twenty-three, no; sixteen, yes; seven, indefinite; two, no reply.

When public hygiene is duly thought of and state preventive medicine has full sway, the adulteration of the food of the people will be deemed one of the most heinous of crimes. Practically, it is allowed now to flourish unrestricted in the majority of the States, even in those which have laws to prevent it. Europe undoubtedly is far ahead of America in this respect.

To *e* the following replies were received: twenty-one, no; ten, yes; sixteen, indefinite; one, no reply.

To *f* the answers are these: twenty-eight, no; ten, yes; nine, indefinite; one, no reply. That is, more than one half of our States and Territories seem unwilling, and less than a quarter claim a willingness to do so. This seems a most natural sequence to all preceding answers.

Third question: Has your State established a state board of health?

(*a.*) If so, when was it established?

(*b.*) What amount of annual appropriation is made for its support?

(*c.*) Are any occasional or extra grants made for special investigations?

(*d.*) Has the board any organized body of correspondents or inspectors throughout the State?

(*e.*) What executive powers have been given to the board with reference to local nuisances or noxious trades?

Twelve have appointed state boards of health, namely, Alabama, California, District of Columbia, Colorado, Georgia, Louisiana, Maryland, Massachusetts, Michigan, Minnesota, Virginia, and Wisconsin. The sums appropriated for them are small, although for special purposes Louisiana and the District of Columbia have spent large sums. Not a single one of them has yet a *perfect* list of correspondents or inspectors.

Fourth question: Have county boards of health been established by law?

The answers are: thirty-three, no; four, yes; seven, indefinite; four, no reply.

Fifth question: Have any town boards of health been established by law?

The answers are: eight, no; fourteen, yes; twenty-two, yes, that is, by local and not state laws; one, indefinite; three, no reply.

Sixth question: Has the State passed any law leading to a thorough and definite improvement of the public health?

(*a.*) By a sanitary survey of the State.

(*b.*) By a law for the registration of births, marriages, and deaths.

(*c.*) If so, how long has it been in operation?

(*d.*) Has the registrar been able to draw from such records any law governing the public health?

(*e.*) Has any law been passed relating to the drainage of land?

(*f.*) Has any law been passed relating to the irrigation of land?

(*g.*) Has any law been passed checking the influence of rivers by levees?

(*h.*) Has any law been passed relating to the introduction of water into cities?

(*i.*) Has any law been passed relating to the prevention of contagious diseases, for example, small-pox, cholera, yellow fever, cattle disease, etc.?

(*j.*) Has any law been passed regulating tenement houses for the poor?

(*k.*) Has any law been passed relative to incorporating building companies for the improvement of the dwellings of the poor?

It is impossible to consider on this occasion all of these points, but I will select those which best illustrate my subject.

(*a.*) As to sanitary surveys the answers are: forty, no; none, yes; one, indefinite; seven, no reply.

(*b.*) As to registration laws the replies are as follows: sixteen, no; twenty, yes; eight, indefinite; four, no reply.

Eighteen out of the twenty answering affirmatively give also some qualifying expression as regards the character or the enforcement of the law; for example, "imperfect," "not carried out," "defective," "carried out only for certain great cities," "dead letter" in one, etc. No one can regret more than I do the necessity of stating these facts. May the sting of its severe truth stimulate us and our children to better works in the coming centuries!

During the last ten or twenty years state registrations have been carried out in a few States, although some of the larger cities have had imperfect returns for a much longer period and Massachusetts began in 1842. The United States government has had decennial censuses since 1790. In order to judge of their value in certain respects, we have simply to look at the strictures made on them by the superintendent of the last.

(*e.*) As to drainage of land the answers are: twenty-four, no; seven, yes; six, indefinite; eleven, no reply.

Only one seventh report affirmatively, but I do not understand that in any case such drainage was made for sanitary objects, but rather to improve the land for agricultural purposes. In Illinois twenty thousand acres of land, comprising at least half of three counties, were drained by the State for agricultural purposes, but with the most gratifying results upon the health and characters of the settlers thereupon.

(*f.*) As to irrigation of land, the replies are: thirty-one, no; five, yes; five, indefinite; seven, no reply.

All the affirmative replies except one, Utah, state that it was done for agricultural purposes. Not one thought of health in connection with it. Even Utah probably thought more of its actual necessities than of sanitary improvement.

(*g.*) As to improvement by levees the answers are: twenty-eight, no; four, yes; five, indefinite; eleven, no reply.

Correspondents from Arkansas state that some levees have been made for agricultural purposes, and one adds significantly, "but it [that is, the levee] has improved the health of those living near the place."

(*h.*) As to water supplies, the States and Territories stand thus: twenty-three, no; fourteen, yes; four, indefinite; seven, no reply.

Indiana and Pennsylvania have general laws on the subject. Probably all the States have permitted either by general or by special statute this introduction of water.

As to prevention of small-pox, the replies are: sixteen, no; twenty-one, yes; seven, indefinite; four, no reply.

As to prevention of cholera, the answers are: twenty-one, no; sixteen, yes; four, indefinite; seven, no reply.

Entirely similar reports come in regard to this disease as in regard to small-pox. All indicate a *laissez aller* method. The United States

government, through the War Department, has published a most invaluable history of cholera in this country, by which alone we can judge what would be the immense value of a central national health council, to undertake such investigations and adopt preventive measures before it becomes too late.

As to laws for prevention of yellow fever, the replies are: twenty, no; twelve, yes; ten, indefinite; six, no reply.

There seems to be a difference of opinion among my correspondents as to whether this disease is endemic or not in some of the Southern States, from which it seems fair to infer that it virtually has a permanent habitat there; but for an accurate and minute knowledge of the essential cause of yellow fever and of the means for its prevention we must look to the coming century. It has virtually disappeared from Boston, New York, and Philadelphia. May we not hope that there may be a gradual but effectual pushing back of this frightful disease until it be fairly excluded from our borders?

As to laws for prevention of the diseases of cattle, the answers are: twenty, no; eleven, yes; five, indefinite; twelve, no reply.

Much money has been expended by Massachusetts and some of the Western States in stamping out cattle diseases. I may refer here, too, as of great value in this connection, to the convention of cattle dealers of the Northern States and Canada, to the Report of the Metropolitan Board of Health of New York, to the action of the legislature of Massachusetts, and finally to the admirable Report of the United States Commissioner of Agriculture in 1871, containing papers by Professor Gamgee and Drs. Billings and Woodward.

(*j.*) As to laws regulating tenement houses for the poor, the replies are: thirty-three, no; four, yes; three, indefinite; eight, no reply.

(*k.*) As to laws incorporating building companies, etc., we stand: twenty-nine, no; six, yes; three, indefinite; ten, no reply.

These two nearly-allied subjects, as we have seen, have received equally little attention. I know of none more important at the present time. The fact is patent to every one that there are in every city and township in this land dwelling-places in which the poor are obliged to live which are a disgrace to modern civilization, where, in fact, it is almost impossible for the dwellers in them to grow up except to filth and crime.

Seventh question: (*a.*) Are there any well-attested facts proving that any disease formerly prevalent in your State has ceased to appear?

The replies are: twenty-five, no; nine, yes; eight, indefinite; six, no reply. Of the affirmative replies, not one presents positive proof of the statement, but some suggest a lessening of some diseases. This seems to be undoubtedly the fact in regard to malarial fevers and yellow fever.

(*b.*) Are there any well-attested facts proving that any disease formerly prevalent in the State has been eradicated by state or individual action

The replies are: thirty-seven, no; none, yes; four, indefinite; seven, no reply. Eighth question: Are there any similar facts proving that any special disease has arisen or been generated, or been introduced into the State during the past century, which did not exist in colonial times and which now remains endemic?

The replies are as follows: twenty-seven, no; six, yes; two, indefinite; thirteen, no reply.

In all the affirmative replies opinions and not facts are given, so that I feel that there is no proof that any new disease has been introduced and become endemic here.

Ninth question: If there be any such new disease, has it been investigated by the State or by individuals?

The replies are: twenty-seven, no; six, yes; two, indefinite; thirteen, no reply. Tenth question: Has the town or city in which you reside taken any measures for the improvement of the public health?

The replies are (*a.*), by health laws: nine, no; twenty-five, yes; nine, indefinite; five, no reply. (*b.*) By special action in specific cases, three, no; twenty-five, yes; eleven, indefinite; nine, no reply.

Eleventh question: Does your town use well-water for culinary purposes?

Twelfth question: Is care taken to prevent pollution?

Thirteenth question: Do you have a water-supply from a distant lake or river?

Fourteenth question: Is care taken to prevent pollution?

For obvious reasons I include all these under one category. Of one one hundred and forty-three towns, eighty-two use wells; sixty-one use rivers or lakes; forty-nine try to keep the water-supply pure; sixty-nine make no attempt to do it; and twenty-five make indefinite replies.

Fifteenth question: Have you sewers to carry off such water-supply?

The replies are: eleven, no; thirteen, yes; twenty, indefinite; four, no reply. These replies intimate very fully the primitive ideas held by the people of this country as to the necessity of carrying off water once made impure. The consequence has been the overflowing of cesspools, with the accompanying soil-pollution and soil-dampening. Of course evil is the result.

Sixteenth question: How far are the sewer-outlets from the source of water-supply?

Upon this question it may be stated that the distances vary from what is practically zero to twenty or thirty miles, and the replies of correspondents often indicate that there has been great neglect on this point.

Seventeenth question: What is your method of disposing of sewage, — house offal, — slops, or filth liable to accumulate about homesteads?

In this respect, too, there is generally in our country gross neglect.

Eighteenth question: Have any state, county, or city reports of health, or deaths, etc., been published?

From the replies of the States I learn that more than three fourths of them have virtually ignored vital statistics during the whole century.

Nineteenth question: How many years approximately or definitely have these registration reports been published?

Owing to imperfect returns, it is impossible to give accurate statements as to this question.

Twentieth question: Has any law of development or of partial development of any disease been discovered by individual or state action, by attention to which in coming centuries we may hope to greatly lessen or destroy disease?

I proposed this question of fact, as the test-question, so to speak, of the centennial period. The replies are: thirty-nine, no; six, yes; one, indefinite; three, no reply.

The affirmative replies, upon further analysis, refer more to the general increase in our knowledge of disease than to any special discovery of a general law like that ascertained in Massachusetts, through the members of the medical society of that State, of the relation of soil-moisture to pulmonary consumption.

Gentlemen, my task is over. I have endeavored to place before you the exact truth in these matters, although no one can feel more keenly than I do that it has been at times most unpalatable. It may seem little creditable to the country. Nevertheless, I have the brightest hopes for the future in this regard. We could not, with the influences hitherto pressing on us, have advanced farther.

We stand now at the very dawn of the grandest epoch yet seen in the progress of medicine. While philosophically, accurately, and with the most minute skill studying, by means of physiology, pathology, chemistry, the microscope, and, above all, by careful clinical observation, the natural history of diseases and the effects of remedies, our art now looks higher still, namely, to the prevention as well as to the cure of disease. And this is to be done by sanitary organization through each state and nation, the laity and the medical profession heartily joining hands in this most noble cause.

Can there be anything more inspiring to intellect or heart than the thought that by laborious research into the causes of disease and the means for its prevention we may contribute our part towards the saving to health and happiness of even a few of the more than two hundred thousand human beings now annually slaughtered in this country by preventable disease?

Standing, as we do, nearly at the close of this centennial birth-year, now at length united into one nation by the close bond of liberty for all the inhabitants thereof, I appeal to young and old alike, to every Amer-

ican and to every collaborating brother of a noble profession now gathered here from foreign lands, to every one within sound of my voice, to join with me in a cordial "All Hail!" to the coming centuries, not only in America but in every civilized spot of God's earth, because everywhere, to all coming time, human life will be lengthened, made more healthy, and consequently more truly happy, by the potent influences of state preventive medicine.

ABSTRACT OF THE ADDRESS ON MEDICINE

DELIVERED BEFORE THE INTERNATIONAL MEDICAL CONGRESS AT PHILADELPHIA.

BY PROF. AUSTIN FLINT.

DR. FLINT recalled to the minds of his audience that one hundred years ago there were two embryonic medical schools in America, one in Philadelphia and one in New York. A few years later we were separated from the mother country by Cæsarean section, and plunged into war. This war called out the medical energies of the colonies, but arrested medical teaching for some years. The leading medical minds were then principally in Philadelphia, New York, and Boston. After the war, Franklin interested himself in founding the Philadelphia Medical College, the meetings of the founders being held at his house until within two months of his death. In 1791 this school was merged into the medical department of the University of Pennsylvania. This latter school was modeled after the school of Edinburgh, and that after the Leyden school. All the professors of the Philadelphia school had been educated in Edinburgh. Rush was then the leading American medical mind. He wrote original treatises and edited foreign works, especially Cullen's work, which was widely read. This shows the activity of medicine at this period. The war, the great need of medical men, and the return of the many who had studied abroad, all combined to force the growth of medicine in America.

Philadelphia inaugurated medical teaching in this country. She was then and is now the great medical centre, and still has no compeer, in literature, teaching, or physicians. She has had a great influence on other cities of the Union. If this influence ceases in the future it will not be because she has weakened, but because of the emulation awakened by her example. It is fitting, then, that the congress should meet here.

At the end of the first quarter of the nineteenth century there were twenty medical schools and two thousand students in the United States. Six of these schools were metropolitan, in Philadelphia, New York, and Boston; fourteen of them were provincial. The latter met the needs of students unable to bear the expense of city tuition. They developed inquiry among physicians in their neighborhood and incited them to

become teachers. Thus their influence was good. There was great jealousy among schools at this time. The first two graduates from Harvard met great opposition, and received their diplomas only through the influence of Dr. John Warren.

At this period there were twenty medical journals. Even now their number is only doubled. Locally they are generally in the interest of some particular school, but they are useful in distributing medical intelligence, and journals relatively obscure have been the media of publication of papers of great value.

It may be said of the profession in America that they have ever been fraternal. May we not claim for medicine that it has raised physicians above the influence of politics? Even the late war did not disturb the strong feeling of friendship between Northern and Southern medical men.

Referring to important agencies in the growth of medicine, Dr. Flint mentioned Cullen as the strongest pathologist at the close of the last century. Following him came Rush, then Good, each having an original system; then Brown, of Edinburgh, the opponent of Cullen. There was at this time no leading system. Rush, Cullen, and Good were the predominant minds, but neither was followed exclusively. In 1801 Valentine Seaman, of New York, began vaccination. In 1817 the Pharmacopœia was projected, and it was published in 1820. In 1846 anæsthetics were first used in Boston, and afterwards introduced into England and the Continent.

Dr. Flint then referred to the many foreign books translated and edited by Americans which have aided medicine in America. In 1829 the first native work on pathological anatomy was published by Horner, and later Gross's work appeared. They were the pioneers. J. B. S. Jackson unfortunately, if not blamably, became satisfied with his position as professor in a leading school and curator of a museum rich in specimens. He might have been more permanently identified with pathology in this and in every other country.

Dr. Flint next referred to auscultation, making honorable mention of James Jackson in connection with the discovery of the significance of prolonged expiration; also mentioning Dr. Holmes as having taken the Boylston prize for an essay on auscultation.

In the diagnosis of heart diseases American physicians were aided by the works of Hope, André, Stokes, and others. Bowditch and Gerhard also made us familiar with this science. Referring to Bright's clinical reports, Dr. Flint said that Bright could not have anticipated the advance in the diagnosis of renal disease to which we have attained in the present quarter of the century.

In the second quarter of the nineteenth century Hayes's *American Journal of the Medical Sciences* first appeared, promising translations of

all important foreign medical intelligence, and valuable original articles. It has kept and still keeps the promise, and is the oldest medical publication in this country, having also the largest circulation of any similar publication in the world. Dr. Flint then made flattering mention of the earnest and prolonged experiments of Beaumont upon St. Martin.

Broussais's works, translated by Hays and Griffiths, won many disciples to Broussaisism. This was the last of the legitimate '*isms*, and has given way to illegitimate '*pathies*. Dr. Flint next mentioned the work of Cook, who believed congestion of the liver to be the *fons et origo* of all disease. Alluding to the Kentucky practice of giving huge doses of calomel in affections of the liver, the speaker told the story of a yeoman, who, while plowing his field, came upon a quantity of metallic mercury and supposed he had struck a mine of wealth, but became quite chop-fallen when told that he had simply plowed up the spot formerly used as the burial-place of patients who had been subjected to mercurial treatment.

The powerful influence and the present worth of the works of Louis and his new departure in methods of study were mentioned.

Jacob Bigelow in 1835 struck the key-note of change in the treatment of disease in his work on Self-Limiting Diseases. Polypharmacy and heroic measures fell into disrepute. Physicians became more reserved and humbly changed to servants of nature. In 1833 appeared the United States Dispensatory of Wood and Bache. In 1847 the American Medical Association was inaugurated for the protection of the profession and for the advancement of knowledge. Allusion was made to the valuable paper of Nathan Smith on typhus. At this time the non-identity of eruptive fevers was accepted as a fact.

In 1846 Meredith Clymer was the first to discover and describe relapsing fever. Dickson and Drake announced their belief in the conjoined action of different morbid influences at the same time in the same person. John Ware inaugurated the numerical method in the use of opium. The large use of opium in peritonitis was referred to as the American method of treatment of this disease. Bowditch in this quarter of the century invented the operation of paracentesis thoracis, and although we now say aspiration in place of suction, using complicated foreign instruments in this procedure, the operation in its origin is American.

Dr. Flint then read the long list of American authors who wrote during the fourscore years following the Declaration of Independence, and asked, "Was not the advance of literature in this country in less than eighty years remarkable?"

Coming down to the last quarter of the century the speaker alluded to some of the characteristics of progress in medical science in America, the advance in histology and pathology, the use of the microscope (refer-

ring here to the brilliant paper on the microscope of Burnett in 1851), the great influence of German medical literature in the direction of pathology, the fondness of Americans for foreign schools, and the unwise prejudice of some persons against this inclination to study in European schools. We should be humble in our relations with the schools of Europe, yet no student from abroad, who has remained the mere satellite of his foreign master, has ever attained distinction.

Reference was then made to the injustice of the non-existence of a copyright law. Republication of French works in translation has become unnecessary because of the present general knowledge of the original. A similar knowledge of the German language it is hoped will soon be as general.

Our literature has been fairly treated and well received abroad. Our works are practical in character because we are young. The leading characteristic of our medical schools is practicality. The responsibility for the character of our profession rests upon the teachers in our schools. The public is practically unprotected by law against practitioners who have no diplomas. We have large schools. They are an indication of progress. Let us try to correct defects, let us improve our methods of teaching, but avoid wholesale condemnation of what has been done. Of our code of ethics Dr. Flint asked what it is and what it does. It has remained unaltered during the past twenty-five years. This reflects honor on the profession. We may claim that the majority of physicians have been honorable. In no other country is the dividing line between illegitimate and legitimate practitioners more sharply drawn than in ours, because in no other country do medical men occupy so high a social grade.

The history of American medicine contains much of which we may be proud. Need we doubt that the spirit thus far shown will lead to a glorious destiny?

RECENT PROGRESS IN ANATOMY.[1]

BY THOMAS DWIGHT, M. D.

Connective Tissue.[2] — Professor Flemming, of Prague, has added a long and valuable communication to the already rich literature of this subject. He has devoted himself especially to loose connective tissue as it is found under the skin and in the interspaces between muscles, and to fat cells. Connective tissue is generally held to consist of fibres and cells. The latter are of various kinds, and in certain places are ranged around bundles of fibres in a way to form more or less perfect sheaths. Professor Flemming adds another element which indeed has

[1] Concluded from page 292.

[2] Archiv für mikroskopische Anatomie, Band xii., Heft 3, 1876.

been admitted already but hardly appreciated. This is the *Kittsubstanz* of the Germans, which is perhaps best translated as *intercellular substance*. It is probably very nearly fluid during life, and contains mucine, which accounts for its coagulation when treated with an acid. Much has been said of the laminar nature of connective tissue, but, without denying that frequently it has a tendency to split in one direction rather than in another, Flemming would compare it to a sponge rather than to a series of layers. Interstitial connective tissue, according to him, consists of a very irregular frame-work bounding splits and cavities which normally are very small but which can readily be distended by fluid or air. The walls of these spaces are covered by a cellular layer formed of cells and intercellular substance, if these terms may be used to describe a layer of cells without borders. Nuclei are seen, and not much else. Flemming holds that the intercellular substance extends also in among the fibres that constitute the frame-work. These are chiefly connective-tissue fibres, but among them are occasional elastic ones. He spends considerable time in discussing the causes of certain peculiar appearances of bundles of fibres that have swollen after the application of an acid. The swelling is not uniform; the bundles present curious constrictions and bulgings which it can often be seen are due to spiral fibres surrounding the bundles. These are of two kinds; the smaller ones, which can be stained with carmine or hæmatoxyline, and are the most common, are formed by coagulated kittsubstanz, while coarser ones, which cannot be stained, are true elastic fibres. It should be noticed that in this kind of connective tissue Flemming does not find any endothelial lining to the cavities which one feels forced to look upon as lymph spaces. Neither does he speak of branched cells lying in free spaces, though such can be demonstrated on strips of subcutaneous tissue taken from the shoulder of a rabbit and treated with silver nitrate to stain the ground substance (or probably the kittsubstanz) and hæmatoxyline to stain the cells. The existence of such cells, however, though not included in Flemming's plan, is not inconsistent with it.

Some of the author's more important conclusions concerning fat are the following. Deposits of fat show the same general structure as loose connective tissue, namely, fibres, intercellular tissue, and cells. The last are not of a distinct class, but simply cells covering the bundles of fibres that happen to be full of fat. Often, of course, no definite boundary of the fatty deposit can be made out. Flemming could find no lymphatics that appeared to take origin in the fatty tissue, though they were seen passing through it. Growth of fat depends on the filling with fat of connective-tissue cells that had previously been free from it, and on the subdivision of cells that were already full. He thinks it possible that wandering cells also may become filled with fat, but does

not consider it proved. In emaciation the fat disappears in two ways: either by a general atrophy of the cell and its contents, or by the change of the latter into fluid, which gradually disappears. A full or normal fat cell has, properly speaking, no membrane, though occasionally the outer layer may have a somewhat different consistence from the interior. In atrophy a membrane occurs, but this does not prove that one normally exists.

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS.

Monday's Proceedings.

At twelve o'clock on Monday, September 4th, the International Medical Congress was called to order by Prof. S. D. Gross, President of the Centennial Medical Commission, in the hall of the University of Pennsylvania. There were, at a rough estimation, four hundred and fifty gentlemen in the audience. The Right Reverend Bishop Stevens, of Pennsylvania, opened the exercises with prayer, after which Professor Gross delivered an eloquent address of welcome, which we regret we cannot give at length. We give merely an extract, in which he dwells with natural pride on the progress of the country as exemplified by such an occasion.

"In its wide range, the present congress is without a parallel. Similar bodies have repeatedly met, but none on so grand a scale or with such a cosmopolitan outlook.

"In organizing the congress the commission may have been guilty of undue partiality towards their own country. Perhaps such a tendency was, after all, only natural. However this may be, certain members felt an irresistible desire to show the world what the century since the establishment of our independence as a free and sovereign people has accomplished for scientific medicine. For this purpose, topics illustrative of the progress and present condition of the different branches of medicine in the United States have been assigned to gentlemen of acknowledged rank in the profession in different sections of the Union. These exercises will, it is believed, add greatly to the interest of the occasion. Time was when we had no medical literature, no medical science; when we were utterly helpless, and wholly dependent upon the aid derived from our European brethren, especially the English, whose language, practice, and habits we made our own. The poverty of the country in these respects cannot be better illustrated than by the fact that we had no native works on medicine and the collateral sciences until after the commencement of the present century. Many of you will recall the words of the great English lexicographer, who, in 1769, in speaking of the American colonies, exclaimed, 'Sir, they are a race of convicts, and ought to be thankful for anything we allow them short of hanging.' The Abbé Raynal, writing in the latter part of the last century, declared that America had not yet produced a single man of genius; and the exclamation of a celebrated Scotch reviewer, uttered at a more recent period, 'Who reads an American book, who goes to an American play, or who looks at an American picture?' is still fresh in the memory of many

of the present race of men. The discourses which will be delivered before you on the progress of American medicine will serve to show that the profession in the United States has earned for itself an enviable reputation, and that it is fully abreast with all the other pursuits that adorn the human mind and shed lustre upon the scientific character of the nation. They will serve to show that we have passed the period of medical provincialism, and that we stand upon a lofty platform, to which we need not be ashamed to invite the representative men of the profession of foreign countries, however illustrious, or however far advanced in the arts of civilization."

Following the address of Dr. Gross, the names of a committee of thirteen, who had been nominated by a committee appointed by the commission, were submitted to the congress for acceptance. The duties of this committee were the nomination of the officers of the congress. Nine of them were Americans, four were Europeans. Their appointment was confirmed by unanimous vote of the congress. Dr. Austin Flint, of New York, was then introduced as the reader of the address on medicine. This interesting address, of which we give an abstract elsewhere, was listened to with great attention, and, at the close, Dr. Gross made reference to the modesty which led Dr. Flint to omit all mention of his own celebrated writings. The address was then referred to the committee on publication.

The thanks of the congress were tendered Dr. Gross for his address, and a copy of it was asked for publication.

The committee on nominations next reported their choice of the following gentlemen as officers of the congress: —

President: Dr. S. D. Gross, Philadelphia.

Vice-Presidents: Dr. Paul F. Eve, Tennessee; Dr. Joliffe Tufnell, Dublin; Dr. W. L. Atlee, Philadelphia; Dr. C. Lasige, Copenhagen; Dr. J. B. Johnson, St. Louis; Dr. F. Seneleden, Vienna; Dr. Hunter McGuire, Virginia; Dr. Johan Hjort, Christiania; Dr. S. G. Richardson, New Orleans; Dr. William H. Kingston, Montreal; Dr. J. P. White, New York; Dr. H. Mujake, Japan; Prof. N. R. Smith, Baltimore; Professor Rudnen, St. Petersburg; Dr. J. M. Toner, Washington, D. C.; Professor Hueter, Griefswald; Dr. G. L. Collins, Rhode Island; Dr. R. F. Hudson, Australia; Dr. H. Gibbons, California; Dr. P. De Basieux, Belgium; Dr. N. S. Davis, Chicago; William Adams, Esq., London, Eng.; Dr. L. A. Dugas, Georgia; Professor Simpson, Edinburgh; Dr. J. K. Bartlett, Wis.

Honorary Vice-Presidents: Surgeon-General Barnes, U. S. A., Surgeon-General Beale, U. S. N.

Secretary-General: Dr. I. Minis Hays.

Assistant Secretaries: Dr. William B. Atkinson, Dr. R. J. Dunglison, Dr. R. A. Cleaman, Dr. W. W. Keen, Dr. Bertolet.

Section of Medicine: Chairman, Professor A. Stillé; Secretary, Dr. J. Ewing Mears.

Biology: Chairman, Prof. J. C. Dalton; Secretary, Dr. J. Tyson.

Surgery: Chairman, Prof. Joseph Lister; Secretary, Dr. J. H. Packard.

Dermatology and Syphilology: Chairman, Dr. J. C. White; Secretary, Dr. A. Van Harlingen.

Obstetrics: Chairman, Professor Barnes, of England; Secretary, Dr. William Goodell.

Ophthalmology: Chairman, Dr. R. Brudenell Carter; Secretary, Dr. J. Green.

Otology: Chairman, Dr. L. Turnbull; Secretary, Dr. C. H. Burnett.

Sanitary Science: Chairman, Dr. Stephen Smith; Secretary, Dr. E. M. Hunt.

Mental Diseases: Chairman, Dr. J. P. Gray; Secretary, Dr. W. Kempster.

Dr. Gross, on taking his seat, thanked the congress for the honor conferred on him, and said that nothing would be dearer to him during the remainder of his life than to have presided over their deliberations. He considered it was an honor not solely bestowed on him, but as a tribute to the profession of Philadelphia, who had been so instrumental in organizing this congress. To preside over such a body is an honor of no ordinary kind.

The meeting then adjourned to meet at ten o'clock on Tuesday.

Tuesday's Proceedings.

The International Medical Congress reassembled at ten o'clock Tuesday morning in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross, president, in the chair.

Dr. I. Minis Hays announced that up to three o'clock, Monday, the names of about three hundred delegates were registered.

Next in order came the reports from sections, which were read.

Dr. T. G. Richardson, of New Orleans, moved that the congress be not held responsible for the reports of the sections, and Dr. Nathan S. Davis, of Chicago, moved that the reports be merely accepted and referred for publication. Both motions were agreed to.

Congratulatory letters from foreign societies were then read, after which were read invitations to delegates to visit the university buildings, the new hospital of Jefferson College, the College of Physicians, and the Academy of Natural Sciences. It was then announced that Room 4, in Judges' Hall, Centennial grounds, had been reserved for the use of delegates.

Dr. Austin Flint, of New York, offered a preamble and the following resolutions, which were adopted: —

Resolved, First. That the members of this International Medical Congress regard with great interest the contribution of a national medical library in the city of Washington, and respectfully petition the Congress of the United States to provide for additions to the number of volumes and periodical publications until the library is made as complete as possible.

Second. That in view of the necessity of what is known as a *Catalogue raisonné* in order to render the library properly available for reference, this International Medical Congress urge the importance of an early completion and publication of such a catalogue.

Third. That the specimen fasciculus of the catalogue, which is stated to be nearly ready for the press, affords evidence of great labor and care, and the arrangements for convenience of reference, it is believed, will prove in all respects satisfactory.

Fourth. That those of the delegates to this International Medical Congress who are citizens of the United States, and other members of the medical profession in this country, are urged individually to exert their influence to secure the enlargement of the library and the speedy publication of the catalogue.

The committee on nominations presented the following additional report, which was adopted: —

Committee on Publication (with power to choose its chairman and an editor): Dr. J. Ashhurst, Jr., Dr. R. J. Dunglison, Dr. William Goodell, Dr. J. H. Hutchison, Dr. Caspar Wister.

Treasurer: Dr. Caspar Wister.

Vice-Presidents of the Sections: Medicine: Dr. R. P. Howard, Canada; Dr. J. J. Woodward, U. S. A.

Biology: Dr. A. Flint, Jr., New York; Dr. F. W. Campbell, Canada.

Surgery: Dr. J. A. Grant, Canada; Dr. J. Ashhurst, Jr., Philadelphia.

Dermatology and Syphilology: Dr. S. Englestet, Copenhagen; Dr. E. Shippen, U. S. N.

Obstetrics: Dr. A. Simpson, Edinburgh; Dr. W. H. Byford, Illinois.

Ophthalmology: Dr. William Thomson, Philadelphia; Dr. W. H. Williams, Texas.

Otology: Dr. A. Buck, New York; Dr. C. J. Blake, Boston.

Sanitary Science: Dr. J. S. Billings, U. S. A.; Dr. H. B. Baker, Michigan.

Mental Diseases: Dr. J. Ray, Philadelphia; Dr. E. Grissom, New Orleans.

Dr. Bowditch delivered an address on hygiene, an abstract of which we print at the beginning of this number.

The sections met at three P. M. In the Section on Surgery Prof. John F. Hodgen, of St. Louis, read a paper on Antiseptic Surgery. He defined septicæmia, and referred to the views of Rindfleisch, Tyndall, and Pasteur. Tyndall concludes that bacteria are irregularly diffused through the air; hence the difference in hospital experience in various sections. In some there is more septicæmia, in others less. In septicæmia the blood contains elements of putrefaction, and the purulent or putrescent elements are derived from fluids. Absorption, as asserted by Billroth, takes place most readily in the early stages of inflammation and in recent wounds. Diseased skin and wounded surfaces take up these matters readily, yet the latter do not pass through healthy granulations. This has been proved by experiment. Putrid pus is found in abscesses in many parts of the body. A destructive inflammation may originate in these collections, the surrounding walls of the cavities may melt away, and septicæmia, following a large flow of putrid pus, is probably due to fresh inflammation in the walls of the abscess or cavity. Debility, fatigue, and the like, induce these changes.

Animals fed on sulphites are not so liable to septicæmia as animals otherwise fed. Any substance that arrests putrefaction is antiseptic. Cotton as dressing is not reliable, because we cannot be sure that it is free from bacteria. Heating the wool or diffusing gases through it (Lister's method) may free it from germs. Charcoal, clay, chalk, Peruvian bark, and pulverized madder-root are all useful, but not absolutely sure. Caustics destroy the living organisms

upon which putrefaction depends. Currents of dry air, by desiccating the fluid from wounds, prevent absorption of putrefying matter. Practice is infinite in variety. One practices isolation; another, ventilation; another watches over the wound; another seals the absorbing surface. One leaves wounds open; another washes and scrubs; another plasters and daubs. All this shows, at any rate, the necessity of great care in protecting wounds. We see, too, the hopelessness of preventing the entrance of bacteria by plasters, powders, or fluids. If we can keep septic matters within bounds we prevent septicæmia. We see this in washing out wounds or inflamed uteri.

The antiseptic ligature cannot be ignored. It becomes absorbed and organized. Lister says that we really surround vessels with living animal tissue. Epithelial cells, as is well known, after removal from their place of origin, can proliferate. Why, then, cannot animal ligatures revive and become organized when around vessels?

Dr. Paul F. Eve uses the tendons of the deer. They become absorbed.

The entrance of septic germs may be prevented, but only for a time. Actual prevention requires such exact care as will be seldom seen. Practically the conditions to be met are so difficult as to make us nearly powerless. Germs having been found under dressings so ingenious as those of Lister, it shows how nearly impossible it is to prevent their contact with wounds.

Professional experience teaches us that, as Billroth asserts, absorption by granulating surfaces does not take place rapidly enough to cause septicæmia. It takes place *before* granulation begins.

Drainage tubes, water baths, and other rapid means of cleansing wounds will prevent absorption.

The paper being concluded, Dr. Hewson, of Philadelphia, related his experience with various dressings, finally adverting to the earth treatment, with which he has been very successful. He thinks water dressings and douchings convey germs, and agrees with an English author who says that all fluids as dressings are bad for this reason. For ten years he has not used ligatures, but acupressure and torsion, and thus one source of putrescence is avoided. Dr. Hewson now removes dressings as infrequently as possible, covering wounds with blue paper, which, he thinks, excludes rays of light. During the past few months he has used salicylic acid, but has not allowed wounds to be washed nor dressing to be disturbed when not soaked by the discharges. At present he finds nothing so satisfactory as salicylic acid. He finds, too, that it relieves pain.

The great event of the day was the discourse by Professor Lister in the discussion that followed this paper. He spoke for three hours, during which he received the most unwavering attention. He first referred to the great trouble which attends a perfect use of the antiseptic method. He acknowledged the wearying care attendant upon its use, but expressed his honest belief that there did not exist a medical man who would not be faithful in carrying out any form of treatment which promised to help a patient. He described an operation by which he recently cut out large wedge-shaped pieces from the two femurs of a cripple in order to straighten his limbs. To do this without strict antiseptic treatment would make success impossible.

Referring to wounds on the head, he said that to remove dressings after days in which they were left untouched, and to find no pus, but fresh cicatrices, was a new era in surgery. This cannot be done without antiseptic treatment. To open the spine, remove carious bone, and restore the patient to health cannot be done without strict antiseptic treatment. To open an acute abscess, press out the last drop of pus, and see no more form can only be accomplished by the antiseptic method. Unless we use this method we cannot safely tie large arteries without deep-seated suppuration. "Indeed," said he, "I should be exceedingly sorry to apply any ligature without strict antiseptic treatment. We need have no hesitation in expressing the belief that although we may have good healing without antiseptic treatment, we cannot thus secure the best results. Antiseptic surgery is dealing with surgical cases in such manner as to prevent putrefaction. When I read Pasteur's original paper I said to myself, 'Just as we may destroy lice in the head of a child who has pediculi, by poisonous applications which will not injure the scalp, so, I believe, we can use poisons on wounds to destroy bacteria without injuring the soft tissues of the patient.' Putrefaction may be caused by an individual himself, because of his feeble condition. In simple fractures, even, we have a serious wound. If we could only see it we should say, 'Here is dead tissue. It must be poulticed to help its removal.' I say in simple fractures are injuries of all degrees.

"If injury follows the opening of an abscess, it is not due to the admission of matter from without, but to the effect upon the pyogenic membrane, which gives it power to absorb, as it did not when intact. So says Billroth. But we did not need to have Billroth tell us that granulations do not absorb, and that putrescent absorption occurs before granulation. I said this in works of mine years ago. We all know how when water dressings are removed from granulating surfaces, the whole ward will stink, and yet the granulations do not absorb. We knew this long before Billroth wrote. The cause of the mischief in the free opening of abcesses without the antiseptic treatment is that the pyogenic membrane is not in a condition of granulation. But in acute abscesses we have a granulating surface, just as we have in recent wounds. It is not so in chronic abscesses. Many abscesses do not form pus at all until they are opened. They are not then in a condition of granulation, but in consequence of their chronicity they can absorb. Granulations covered by epithelium develop in proportion to the amount of epithelium. In pyogenic membranes the surface will absorb in proportion as it resembles a sore with the granulations stripped off. I have seen a patient die within twenty-four hours, and before the membrane had had time to granulate, by absorption of putrescent matter, and although the fluid discharge was clear and not yet pus, it stunk."

Professor Lister then showed his common and most reliable dressing. He uses carbolic acid, but insists that it be perfectly pure. That which makes carbolic acid unpleasant to the smell is cresyllic acid. "If a solution of acid and water be not clear, the cloud is caused by insoluble carbolic acid, and this portion will irritate the hands if rubbed upon them. But a perfectly pure solution will not do this. Carbolic acid has the property of penetrating

through many, even oily, substances and will cleanse more perfectly than anything else I know." Lister likes salicylic acid, but prefers carbolic because more volatile and hence more searching. He then showed his ingenious spray producer, which is so arranged that the spray can be directed at any angle upon a wound without the need of an assistant. He begins his dressing by first requesting his patient to cleanse the injured part by washing. He used to excise the carpus. Now he does not like the operation. In case of injury in which there is great mobility of the wrist, he makes two or more free incisions into the joint, keeps the wound open, and uses a drainage tube, with good results. The finger-nails should always be cleaned before the hand or finger is introduced into the body. Nothing of this sort should be neglected. Be sure not to introduce anything into the wound not cleansed by the carbolic acid lotion of one part of acid to twenty of water.

Lister uses a coarse netting dressed with a mixture of carbolic acid one part to resin five parts. He first lays upon the wound a piece of oil silk well varnished with copal varnish and wet in the carbolic-acid lotion. He does not use this in opening abscesses, because he does not wish them to heal. If the gauze went first upon the wound it would irritate and cause a flow of pus, but if the oil silk be first laid on we may leave the dressing for a week. The trouble is great, but it pays. If during an operation an instrument be laid on the table it should not be again used until it has been dipped into the carbolic-acid lotion. Those who use the method do this instinctively. The gauze is next laid on, first being dipped into the carbolic-acid lotion. The remainder of the dressing, already prepared of layers of calico, oil silk, and wadding, must not be laid on without first protecting it by gauze dipped into the lotion, because, having been lying upon the table, it may be covered with germs. All this is done under a cloud of spray, and when the dressing is changed it must be done under the spray, and one must see that this plays between the dressing and the skin of the patient. The whole is bound on by a roller of silk gauze moistened in the solution.

Lister then at great length explained his own experiments and those of others with milk, water, urine, and other fluids, variously protected from bacteria by covers, or by boiling, and he showed how germs may find entrance into fluids, and how these fluids may be protected from them. In regard to bacteria found in freshly voided urine, he said he believed that a healthy mucous membrane in the urethra prevents the development of bacteria. In lesions of the membrane, if it be washed by a solution of water and carbolic acid, and the penis be washed in the solution and a cap soaked in the solution be put on, the urine will not change in any respect. He then described his catgut ligature and his method of preparing it. He at first tried chromic acid, but that substance made the ligature too hard. He then tried glycerine, chromic acid, and water; next, chromic acid and carbolic acid; now he uses chromic acid, glycerine, water, and spirits of wine.

Professor Gross then said that for years he has prevented irritative fever in patients who had chronic abscesses, without the antiseptic method, by putting them at once under the influence of anodynes and keeping them thus for several days.

In reply to a question as to the use of the antiseptic treatment on abdominal lesions, Lister mentioned a case in which the bowel protruded and lay outside the cavity for half an hour, covered with a cloth dipped in the carbolic-acid solution. The bowel was returned and there was not the slightest disturbance of the peritoneum. All operations are done under spray. He himself never did ovariotomy because there was an ovariotomist in his hospital, but all of his six colleagues, with one exception, employed the antiseptic treatment as carefully as he himself, and their success is in proportion to the amount of care they use. Lister said many other things of interest, but lack of space will not admit them here. He spoke three hours and kept the attention of his audience to the end. He explained away the report that bacteria had been seen under his dressings, by saying that the report was started by Ranke, Volkmann's assistant in Halle, who thought he had discovered bacteria, but, when Ranke came to Edinburgh, Lister showed him that these supposed bacteria were only a microscopical illusion, a false impression caused by a movement of the fluid in the field of the microscope, which movement was communicated to particles of inanimate matter which resembled bacteria. Ranke confessed his error.

In the Section on Medicine, Dr. J. J. Woodward read his paper on typho-malarial fever, and answered the question, "Is it a special type of fever?" in the negative. Curves which he has constructed show that this form of fever occurs most intensely in autumn. Some sections, as New England, New York, West Virginia, and others are free from this fever, but it prevails in the Southern States and on the Atlantic coast, increasing as we go south. Throughout all the great regions occupied by our armies in the late war, these fevers prevailed with excessive force; disordered livers and big spleens were abundant.

Typhoid fever is more frequent in the North than at the South, but exists everywhere. It decreases as we go south, but areas occur in which it is prevalent. Liebermeister compared the statistics of typhoid fever and found it generally autumnal, except in Milan. Dr. Woodward thinks that Liebermeister's curves represent the annual course of typhoid in America, and has addressed the question to secretaries of boards of health all over the country, but has not yet had time to analyze their replies. He thinks that typhoid rages most from September to November. In numerous districts of America intermittent and remittent fevers once prevailed. The intermittent fevers decreased, and remittent took more and more frequently the form of typhoid fever. When the periodical fevers form epidemics, the typhoid retires until they disappear.

The supposition that diseases can exist only as entities is dead. The typhoid and intermittent do exist as hybrids. This was appreciated by Dickson and Drake. Dr. Woodward does not mean that typho-malarial fever is a type, but a condition, due to exposure to elements which cause intermittent and typhoid fevers. In groups of cases in which the malarial element at first predominated, but after a week typhoid and continued symptoms set in, some symptoms failed, as rose spots and diarrhœa, but other symptoms were present. Many cases ended favorably because, Dr. Woodward thought, of the free use of quinine. Fatal cases showed, at autopsy, only sharp catarrh of the

bowels, but sometimes the glands of Peyer were swollen and pigmented, or the surrounding mucous membrane was pigmented. In others the spleen and liver were enlarged, and a diphtheritic condition of the mucous membrane of the bowels was found. In fact, every variety of difference between typhoid and intermittent existed. Dr. Woodward could not and would not attempt to draw the line. In a second class of cases, typhoid predominated. They were clinically more like typhoid, but there was an unwonted tendency to intermissions and periodicity. There were also gastric disturbances and ague spasms. But after death these cases showed only typhoid conditions. The spleen was much enlarged in many cases. Uncomplicated typhoid was not the prevailing form, whatever may have been said.

Dr. Woodward sees in periodicity an additional reason for the great mortality in our army. A scorbutic taint was also wide-spread and must have influenced the general condition of fever patients, increasing their tendency to mental and bodily debility. In fatal cases Peyer's patches were in the form of black sloughs, evidently modified by the scorbutic element.

"Is typho-malarial fever a special type of fever?" Dr. Woodward's opinion is that it is not, but only a hybrid of old and well-known conditions. The essential point is the recognition of hybrid or complicated forms of typhoid and malarial fevers. The scorbutic element was only the accident of our war. Dr. Woodward still believes that simple typhoid and simple remittent did occur, but to what extent has not been tabulated.

He closed his paper by quoting leading men who accept his theories.

In the Section on Medicine the afternoon was mainly occupied in discussing the question as to the duality or unity of croup and diphtheria. The majority were decided disciples of the dual theory.

The paper on Medical Teaching, by Professor Reid, of Halifax, advocated the greatest simplicity in teaching, in the use and number of terms. The paper, though clear in matter and good in quality, was so elementary in character that it was voted that it should not be reported to the general meeting.

In the Section on Obstetrics the papers for the day were read and warmly received. An extra paper on Dressing of the Pedicle in Ovariotomy was also read, and gave rise to the usual long discussion.

In the Section on Dermatology the question, "Are eczema and psoriasis local or constitutional manifestations?" was discussed in the paper read by Dr. Bulkley. The unanimous decision was in favor of the constitutional character of these affections.

Your reporter failed to hear the probably interesting paper on the Excretory Functions of the Liver, read by Dr. Austin Flint, Jr., before the Section on Biology.

This section listened to Professor Johnston's paper on Microscopy of the Blood. It was stated during the reading of the paper that there are two varieties of fish which have circular red blood corpuscles.

The discussion which followed settled into consideration of the old question concerning the ability of microscopical experts to distinguish the blood corpuscles of man from those of animals. The ground taken by Dr. Richardson is that if the question be narrowed down to whether this blood be that of man

or of sheep, the microscope will reveal the difference without failure. Nothing new was developed by the discussion.

The Obstetric Section listened to Dr. Byford's paper on Uterine Hæmorrhage. The remaining sections were but poorly attended.

Monday evening, the physicians of Philadelphia gave the delegates a reception at Judges' Hall in the Centennial grounds.

The two receptions given by Drs. Thomson and Wilson were fully attended and very elegant in character.

Wednesday's Proceedings.

The International Medical Congress reassembled this morning at ten o'clock, in the chapel of the University of Pennsylvania, West Philadelphia, Dr. S. D. Gross in the chair.

Dr. John L. Atlee moved that the secretary or the publishing committee be requested to send to the governor of each State and Territory, and to each Province in Canada, a copy of the address of Dr. Bowditch. Adopted.

Dr. I. Minis Hays reported that the names of over four hundred delegates had been registered.

The National Temperance Society here presented a request, which was quietly and unanimously tabled.

Dr. Seguin, of New York, addressed the congress, after which the following was adopted :—

"The International Medical Congress of 1876 recognizes the advantages which would accrue from the introduction of a gradual uniformity in the multiple and heterogeneous elements of physic, as posology, nomenclatures, etc., and in the means and records of medical observation.

"In consequence, the congress appoints three delegates to the International Congress of 1877, to meet at Geneva, Switzerland, with the special duty of presenting a schedule of the means of uniformity in physic actually applicable in all countries, and another of those which could soon be made acceptable by the profession at large. Said delegates to be advised to invite the coöperation of the men who have already worked for the same cause at the International or National Medical or Pharmaceutical Congresses of Paris, Vienna, St. Petersburg, Brussels, and Buffalo."

Reports from the different sections were then presented.

The Section on Mental Diseases reported on the question of Responsibility of the Insane for Criminal Acts as follows: *Resolved*, "That there is at present manifested a tendency to hold the insane responsible for the commission of acts. That this tendency is unjust, unphilosophical, and contrary to the teaching of pathology, which clearly points out that insanity is the expression of disease."

The Section on Sanitary Science reported on the paper on Hospital Construction and Ventilation read by Prof. Stephen Smith, of New York, as follows: "*Resolved*, That the report of Dr. Smith be recommended to the congress for publication. While the section does not pass judgment as to the conclusions of the report, the paper contains much of an interesting and historical character."

The Section on Otology, on the question, "What is the best mode of uniform measurement of hearing?" reported by Dr. Charles H. Burnett, concludes that "the preference should be given to the voice over the watch and tuning-fork, and recommends a series of test words."

The Section on Biology, in reference to the paper by Prof. Austin Flint, Jr., on Excretory Functions of the Liver, reported Dr. Flint's conclusions as follows:

(1.) Cholesterine exists in health in the bile, the blood, and nervous matter, also in the crystalline lens, in the spleen and in meconium.

(2.) Cholesterine is found for the most part in nervous matter, from which it is passed into the blood. The blood gains cholesterine in its passage through the brain. Its formation is constant, and it is always found in the blood.

(3.) Cholesterine is separated from the blood by the liver and is discharged with the bile. It preëxists in the blood, serves there no useful purpose, and if it is allowed to accumulate, blood poisoning results.

(4.) The bile has two separate and distinct functions, to which the so-called biliary salts, glycocholate and taurocholate of soda, contribute; these do not exist preformed in the blood, but are the products of secretion. The second function of the bile is excretion with depuration, this being accompanied by removal of cholesterine, which it obtains from the blood.

(5.) Normal fæces do not contain cholesterine. The latter substance is represented by stercorine, formerly called seroline, into which it becomes converted in its passage down the intestine. The conversion of cholesterine into stercorine does not, however, take place when digestion is arrested or when it is not necessary, as is shown by the presence of cholesterine in its own form in the fæces during fasting, and in the meconium.

(6.) The difference between the two varieties of jaundice — one mild, the other severe — is dependent upon obstruction of the bile ducts in the one instance, with reabsorption of biliary coloring matter, while in the other there is retention of cholesterine in the blood, in consequence of destruction of the parenchyma of the liver.

(7.) That condition of the blood dependent upon the presence of cholesterine in the blood I call *cholesteræmia*. It is characterized by symptoms referable to the brain, and may or may not be attended with jaundice.

(8.) Cholesteræmia does not occur in every disorder of the liver, because even when a part of the organ is disordered, there may remain a portion still capable of performing the function of excreting cholesterine.

(9.) In case of simple jaundice, even where fæces are decolorized, there is an accumulation of cholesterine in the blood.

(10.) Cholesterine bears the same relations to the liver as urea does to the kidney.

The question as to whether eczema and psoriasis are local or constitutional was decided by the Section on Dermatology in favor of the constitutional character of these lesions.

The remaining sections did not report.

The address on Surgery was then read by Prof. Paul F. Eve, of the University of Nashville.

It is not easy to make an abstract of a paper which was almost purely encyclopædic in character.

Dr. Eve first referred to the condition in which America was left by the war for independence. Our surgeons had no name abroad. Even Physick, the "Father of American Surgery," was not admitted as house surgeon to a London hospital. But fifty years later a French surgeon said to an American student, "You ought to be proud of America, for she holds the sceptre of surgery." An historical sketch of Physick then followed, including notice of his invention of the seton, and forceps; his adoption of animal ligature, buckskin being preferred; his invention of the tonsillotome; his operations for stone; his paper on Cystic and Sacculated Rectum. His nephew published a work on surgery which embodied Physick's views. This work became a text-book in Edinburgh. Intimately connected with the rise of surgery were four other surgeons: Warren, Mott, Dudley, and Gibson.

There were three distinguished Warrens: Joseph, the martyr of the Revolution; John Warren, who gave the first course of lectures on Dissection, and thus probably inaugurated the medical department of Harvard University. J. Collins Warren succeeded his father in 1815. He contributed greatly to medical literature, his work on Tumors being published in his seventy-seventh year. He was the first surgeon who operated under ether. J. Mason Warren has also left a brilliant record.

Mott was then mentioned. He was the first to tie the common iliac; he tied the common carotid fifty-one times; amputated more than one thousand limbs; no surgeon ever tied so many arteries with such safety as he. Astley Cooper allowed that Mott had performed more operations than any surgeon who had ever lived. He probably never had a superior as an operator. Dudley graduated in Philadelphia in 1806. His theory was that if the chylo-poietic viscera were properly cared for, the rest of the body would take care of itself. He took advantage of nature and rest. He originated the medical department of the Transylvania University, Lexington, Ky. He claims the first cure of aneurism by tying the common carotid. He was known as the lithotomist of the West. He cut for stone two hundred and twenty-five times and lost only six patients.

Gibson, of Baltimore, was probably the best lecturer who ever lived in America. He was the first to tie the iliac in gunshot wound; he twice performed Cæsarean section, in both cases saving mother and child.

Dr. Warren Stone, of New Orleans, was the first to ligate a human artery with wire.

An American surgeon was the first to cure popliteal aneurism by pressure.

This paper was eloquent and interesting, but was a closely-written sketch of the men who made American surgery, and cannot be fairly reproduced in a limited space.

Dr. J. M. Toner's paper was then read, his subject being Medical Biography. He said, "Gentlemen of the Centennial International Medical Congress, I appear before you to discharge the duty assigned me of preparing a biographical retrospect of the medical profession of the United States during the centennial period just passed. Though apparently an easy task, I cannot ap-

proach it without hesitation, apart from the feelings of diffidence which under any circumstance this occasion and this audience must inspire.

"In glancing over the period to be embraced in this retrospect I am struck by the paucity of really striking events which influenced the practice of medicine, which have left special marks at the end of the first century of our national existence. Wars have generally been promotive of medical science, and our profession was no doubt much benefited by the contest for independence.

"For the first quarter of a century after this armed struggle, the leading physicians and surgeons were those who had served in the army. The most notable event of this period was the occurrence of an epidemic yellow fever, which appeared in the summers of 1793 and 1798 in nearly all our Atlantic cities. This disease tested the courage and taxed the energies and best skill of the profession, and prompted the more eminent to reduce their observations to writing, and to have them published either in defense of their practice or for the laudable purpose of making contributions to medical science.

"The second quarter of the centennial period was distinguished by the introduction of vaccination, the occurrence of spotted fever, and the war of 1812.

"All of these were events which stimulated the profession to more extended studies, and became incentives to authorship; this was especially true of the disease known as spotted fever.

"The war of 1812 proved to be another great school of experience, although it was not fruitful in medical reports or publications. The aspiration which it aroused, however, in the profession, gave an impetus to the establishment of medical periodicals and the founding of medical colleges and hospitals.

"In following out the plan of dividing the century into quarters, the third may be marked as noted for the discovery of anæsthesia, the epidemic of Asiatic cholera of 1832 and 1848, and the war with Mexico, as well as the discovery and the application of many new and improved methods of physical exploration in the search for disease.

"The last quarter, which has just closed, is specially distinguished by the vast experience of the late war, which was a great school, and which has benefited the medical profession of the whole country; the extended use of anæsthesia in painful surgical operations, the increase of scientific means for exact diagnosis, the introduction of new and potent remedies and modes of administration, and the founding of hospitals and medical colleges in nearly all the large cities."

In the more strictly biographical part of the address he alluded especially to Drs. Benjamin Rush, Philip Sing Physick, Daniel Drake, John and John Collins Warren, Nathan Smith, Reuben D. Mussey, James Jackson, Nathaniel Chapman, Elisha Barton, John K. Mitchell, and John Morgan.

In the Section on Surgery, Professor Van Buren's paper should have been read in the order of the programme, but Prof. Lewis B. Sayre first read his paper on Coxalgia. Since Dr. Sayre had arranged to make a practical display of his method of treating this disease at the Philadelphia Hospital, he omitted much of the general detail of the subject. He drew the following conclusions: —

(1.) That morbus coxarius is a disease peculiar to early childhood, or the age of reckless indifference.

(2.) That it is almost always of traumatic origin, and not necessarily connected with vitiated constitution.

(3.) That *rest* and freedom from pressure of *the parts* involved, while at the same time the rest of the body is allowed free exercise in the open air, and a nutritious diet, is the best treatment that has yet been devised for this disease.

(5.) That if this plan of treatment is adopted in the early stages of this disease, the majority of cases will recover with nearly, if not quite, perfect motion and without deformity.

(5.) That in the advanced *second* stage of the disease, when absorption cannot be produced, it is better to puncture or aspirate the joint and remove its contents than to leave it to rupture by ulceration.

(6.) That in the third stage of the disease, when the treatment recommended in this paper has been properly applied without satisfactory improvement, but progressive caries continues, then *exsection* of the diseased bones is not only justifiable but absolutely necessary.

(7.) That the operation of exsection of the hip is easily performed and attended with no danger.

(8.) That after exsection of the hip-joint in cases of caries the recovery is much more rapid and certain, and infinitely more perfect as to form, motion, and the usefulness of the joint and limb, than when left to the slow process of nature's exfoliation.

Dr. C. H. Mastin, the reporter on the Causes and Geographical Distribution of Calculous Disease, was unable to be present. His paper was read by Dr. H. Lenox Hodge. Dr. Mastin states that —

The *probable* causes at work in the formation of calculous affections are: —

(1.) Hereditary influences, which control a diathesis.

(2.) Digestive troubles, induced by an excess or deficiency of proper diet.

(3.) Sedentary life, with indulgence in stimulating food, by which healthy nutrition and assimilation are altered to mal-assimilation and mal-excretion.

(4.) Climatic changes, deficiency of clothing for the proper protection of the body, and an arrest of the healthy function of the dermoid tissue.

(5.) Want of harmony between the great secreting and excreting organs of the system, — the liver, skin, and kidneys, — with catarrhal affections of the uro-poietic viscera favoring the formation of a colloid medium.

(6.) Injuries of the spinal cord, from which a proper nervous influence over the mucous membrane of the urinary organs is lost; foreign bodies introduced into the bladder, producing cystitis, with its consequent muco-purulent discharge, from which the phosphates are precipitated.

In the section relating to hereditary influences he takes the ground that gout and calculus are nearly akin, one being the result of an excess of urate of soda in the system, the other dependent upon an undue proportion of uric acid; he tries to prove that they are two different phenomena springing from one and the same root, and that consequently the causes which produce the one must influence the other.

Owing to want of time he was unable to enter into an extended review of

the geographical distribution of calculous affections, and hence confined his remarks on this point to calculus in America.

The paper on the Medical and Surgical Treatment of Aneurism, by Prof. William H. Van Buren, of New York, was a very valuable compilation. The subsequent discussion was shared by Professor Lister and Prof. Joliffe Tufnell. The latter illustrated his remarks by means of photographs and prepared specimens. Rest was the treatment he especially advocated. In regard to aneurism, Lister remarked that the question was not so much as to whether an aneurism were idiopathic or traumatic, but as to the amount of danger involved in surgical interference. If an aneurism were traumatic we at once cut down upon it and ligate the artery, knowing that no matter where we ligate the vessel will be healthy. On the contrary, in idiopathic aneurisms we may have an artery which will not bear a ligature until we have dissected far up or down its continuity. In these cases it is almost as well to do the old operation at once.

Lister said he thought the old tourniquet much safer than is commonly supposed. He believes that when it produces ill effects it has not been rightly adjusted, or it has been left in the hands of unqualified assistants. Symes had only one death in forty cases, and this because he used compression. Lister then described his treatment of nævæ, by strangulation, the only modification being the use of carbolized catgut ligature.

Dr. John Ashhurst, of Philadelphia, then said that in regard to the abdominal compression, Professor Pancoast had not claimed the credit which belonged to him. He was too busy a man to publish all he did. "But," said Dr. Ashhurst, "Professor Pancoast invented a compressor which antedated Lister's instrument about two years," although it was acknowledged that Professor Lister's compressor was more perfect. Dr. Ashhurst felt that as an American he ought to claim thus much credit for a native surgeon.

Professor Joliffe Tufnell then informed the section that in 1835 LeStrange, of Dublin, left his collection of surgical instruments to two colleges in that city, and that among them was a compressor, invented by LeStrange, proving that there is almost literally nothing new under the sun. But it was felt by some that Tufnell was not quite fair in this allusion to LeStrange's instrument, for *it* was a simple abdominal compressor, used only in treatment of aneurism, whereas Pancoast's compressor was invented and used entirely for the purpose of checking and controlling hæmorrhage during operations at the hip-joint, so that a comparison of two similar instruments which were invented for entirely different uses should not have been made.

It was then announced that Professor Estlander, of Finland, would read, on the following day, a paper on Osteo-Sarcoma, and another on Vesicle Disease in Finland.

In reply to a question concerning his statement that animal ligatures became reorganized, Lister said, "I do not claim that the ligature comes to life again, but that it disappears particle by particle, the place of each decaying particle being filled by a new one, just as in rebuilding a wall we might put a new brick in the place of an old one."

(*To be concluded.*)

THE INTERNATIONAL MEDICAL CONGRESS.

Of the many striking events in the celebration of this year none is so interesting to the profession or has been crowned with such uniform success as the congress which met last week at Philadelphia. We have neither time nor opportunity to discuss details, for all our available space has been devoted to our report of the proceedings, which we offer to our readers at this early date. Its preparation has involved great exertion, which we trust our readers will appreciate. In our next number we shall continue the report, and we hope then to be able to discuss some of the leading features of the assembly. Everything that has as yet reached us deserves the highest praise. The addresses have been worthy of their distinguished authors, and the papers and discussions have enriched science. The tone of the meetings has been scholarly and dignified. We feel that the physicians who designed it may well be proud of their celebration of our national anniversary.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 2, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	610	29.89	29.35
Philadelphia	825,594	345	21.73	22.24
Brooklyn .	506,233	220	22.59	24.92
Chicago . .	420,000	226	27.96	19.75
Boston . .	352,758	167	24.62	26.20
Providence	101,500	45	23.05	19.02
Worcester .	51,087	30	30.51	20.91
Lowell . .	51,639	29	29.14	20 55
Cambridge	49,670	17	17.79	23.31
Fall River	50,372	38	39.22	23.99
Lawrence .	36,240	16	22.96	25.96
Lynn . .	33,548	21	32.55	19.23
Springfield	32,000	11	17.87	20.93
Salem . .	26,344	17	33.55	22.92

Normal Death-Rate, 17 per 1000.

Books and Pamphlets Received. — The Treatment of Anteflexions of the Uterus. By Ely Van de Warker, M. D. (Reprinted from the New York Medical Journal, June, 1876.) New York.

The Collateral Circulation in Aneurism. Report on the Successful Ligations of the Innominate, the Common Carotid, the Vertebral, and the Internal Mammary Arteries, in a Case of Right Subclavian Aneurism. By A. W. Smith, M. D., House Surgeon, Charity Hospital, New Orleans. 1876.

Diseases of the Bladder, Prostate Gland, and Urethra. By Frederick James Gant, F. R. C. S., Surgeon to the Royal Free Hospital. 1876.

Clinical Studies of Diseases in Children. By Eustace Smith, M. D. Lond. 1876.

All the above published by Lindsay and Blakiston, Philadelphia.

Transactions of the Medical Association of the State of Alabama. A State Board of Health. Twenty-Ninth Session, 1876. Montgomery. 1876.

The Fourth Annual Meeting of the Public Health Association will be held at Boston, from the 3d to the 6th of October, at the Institute of Technology. Many valuable papers are promised.

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THE BOSTON
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ABSTRACT OF A PAPER ON THE ANATOMY AND PHYSIOLOGY OF JOINTS.[1]

BY HARRISON B. ALLEN, M. D.

THE purpose of a limb being subservient to both support and motion, it is reasonable to expect to find in certain joints the former predominating, and in others the latter. When the purpose of support is conspicuous, the joint may be called a static joint; when, however, this purpose is subordinated to flexion (*i. e.*, deviation from the line of support), the joint may be said to be dynamic.

The most striking distinctions between the static and the dynamic articulations lie in the relations of the opposed surfaces. To explain this portion of my remarks some previous consideration of the significance of movable joints is necessary. I premise that the typical ball and socket joints are found only where a well-defined ball is embraced by a perfect socket. No such joint is found outside of the vertebral column. While the articulations between the bodies of the vertebræ are included in the amphiarthroses, the central intervertebral mass nevertheless constitutes a true ball, and the opposed vertebral surfaces and the thickened peripheral fibrous bands uniting the bodies constitute together the socket within which the ball plays. But in the limbs the so-called ball and socket joints are but portions of balls playing within partial sockets. In the usual meaning of the phrase, therefore, any segment of a spheroidal surface applied to a concave surface may be said to be of the ball and socket or enarthrodial variety.

To resume the interpretation of my proposition. It is found that the varieties of such joints, and of their significance, whether they be static or dynamic, are determined by the relations of the two surfaces. If the ball is in the socket, rest is suggested, but if it is suspended from the socket, motion.

The occipito-atloid articulation may be presented as an example of the static joint, and the temporo-maxillary articulation as the dynamic joint. Obviously the latter joint maintains its relations more easily

[1] Read at the meeting of the International Medical Congress, before the Section on Biology.

than the former, which as a rule has large and important muscles aiding thereto. Witness the muscles about the shoulder, hip, and mandible compared with those about the occipito-atloid articulation. The term swinging joint may be applied to this variety.[1] I think it may be concluded from the above that the dynamic joints are most liable to dislocation, and the static joints least so. Thus in the lower extremity the hip-joint is dislocated more frequently than the astragalo-scaphoid joint, and in the upper the shoulder-joint is displaced more frequently than the metacarpo-phalangeal. The dislocation of the occipito-atloid is almost unknown.

The facets upon the opposite ends of bones are arranged in the order of the succession of the bones themselves in a given limb. The most evident arrangement is to have a facet upon the proximal and distal surface of each bone, in such wise as to allow the longitudinal axis of the bone to answer to the centre of each facet. These may be termed primary facets, since they are the most constant in any series of studies, and are least subject to change in special apparatuses.

Assuming that the generalization of Goodsir is correct, that a process sent from the main shaft of a bone, as from the ribs of many animals, as fishes and birds, may be termed a rayed process or actinopophysis, I suggest that the same term may be given to the branched process in a forked rib. If this be conceded, I think it not improbable, in the event of both the shaft of a bone and its actinopophysis becoming facet-bearing, that such ray-borne articular surface may receive the name of actinic or secondary surface. I believe that the inner femoral condyle is an instance of such a surface.

The remainder of my remarks will be in application of the above data to the study of joints, including new observations of some special forms of articulation. In the knee-joint, for example, I think it can be shown from the shapes of the articular surfaces that the outer femoral condyle is the static or axial half, and the inner the dynamic or swinging half. This study involves many details which would take too much time to enter into at present. Suffice it to say, however, that when a person stands erect the femur rests upon the tibia as a ball in its socket chiefly through its outer condyle. In flexion this condyle is "switched off" (chiefly through the action of the popliteal muscle) on the external semicircular disc, while the swinging of the inner condyle of the tibia upon the inner femoral condyle is the gliding of a shallow concave surface on the tibia over a slightly convex surface on the femur.

The term "switching off," as applied to the outer femoral condyle in passing from extension to flexion, needs explanation. The outer tibial

[1] In the static the increase of weight adds to the utility of the apparatus; in the dynamic the increase of weight impairs the same, which must be complemented by increased muscular or ligamentous power.

condyle is observed to be convex toward the tibial spine. It is evident that if any portion of the convex surface of the femoral condyle come in contact with this convexity, no support is possible. This is what takes place when the knee is flexed. But when it is extended, the femoral condyle is placed firmly in a tibial concavity, the inner boundary of which is now formed by this eminence. As above stated, the outer semilunar cartilage is the factor producing this change.

The outer tibial condyle is a true saddle surface, modified by the presence of the semilunar cartilage. The best example of a pure saddle surface is seen on the proximal surface of the trapezium. Here the convexity increases also toward the inner border. The first metacarpal bone of the thumb may be described as lodged upon this convexity in flexion of the thumb, and as relaxed or "switched off" in extension. It is evident that this lodgment and relaxation must be limited by appropriate ligaments. Inordinate or uncorrelated motions determine dislocation.

Dislocation and fracture do not always depend upon the degree of force but upon its direction, as well as upon the state of the body at the time of the accident. *A priori* it is more difficult to dislocate a static joint than a dynamic. But the associated muscles of the latter kind may so fix the joint as to make dislocation an impossibility. If, however, muscles be surprised, the dislocation is then easy. It appears that in most instances of dislocation this actually occurs.

A careful study of a fall with the hands prone shows that bones break more frequently than they luxate for the reason that the muscles are prepared for the shock, and also that the lines of conduction of the force answer to the points of support or of suspension as already given.

The limbs of many lower animals, such as the wings and feet of birds and wings of bats, exhibit special adaptation in joints by which muscular power is economized. Joints thus fixed may be said to be locked. Application of this principle to some joints of human anatomy is practicable. Thus for example the knee-joint is nearly immovable at forced extension and forced flexion, but freely movable at points between. It is probable that a careful study of other joint surfaces will show similar adaptations, notably the larger swinging joints, such as the shoulder and hip. In conclusion I may invite attention to the close harmony existing between one joint or portion of joint of a limb and all others of its kind. When we see the influence of a muscle such as the tensor vaginæ femoris or biceps flexor exhibited throughout the entire lower extremity, we are taught the fallacy of endeavoring to fix any given joint by an apparatus embracing the joint only. ***The entire limb must be at rest before any of its joints can be.***

ABSTRACT OF THE ADDRESS ON MEDICAL CHEMISTRY AND TOXICOLOGY

DELIVERED BEFORE THE INTERNATIONAL MEDICAL CONGRESS AT PHILADELPHIA, SEPTEMBER 5, 1876.

BY PROFESSOR THEODORE G. WORMLEY, M. D., COLUMBUS, OHIO.

PROFESSOR WORMLEY first referred to the intense desire of the ancients to make nature reveal secrets which would be of use in healing disease. He next called attention to the rapid growth of the science of chemistry.

Two years ago the centennial of chemistry was holden in the home of Priestley, discoverer of nitrous oxide gas. The writings of Benjamin Silliman on the contributions of America to chemistry show what we have done. After the discovery of nitrous oxide, Humphry Davy began to experiment with gases. Many have labored in this field. Some of the valuable men, like Davy, emerged from pharmacy to become chemists. We cannot dissever pharmacy from chemistry, and must admit that the pharmaceutists of America have contributed much to medical advancement. Then followed a sketch of Rush, in connection with the University of Pennsylvania, as the earliest professor of chemistry in the United States. In the Medical Department of Harvard University Aaron Dexter was appointed to the chair of chemistry in 1783. In 1792 Dr. Mitchell was appointed to a professorship in the New York University. In 1797 Mitchell published the *Medical Repository*, the first chemical journal in the United States. In 1793 John McClean was made professor of chemistry in Nassau Hall. In 1795 Benjamin Silliman was made professor of chemistry in Yale. In 1805 he edited the *American Journal of Science and Art.* Chemical work in our medical schools has not been markedly scientific, but there is now decided improvement shown in the laboratories of Harvard and the University of Pennsylvania. Dr. Robert Hare was made professor of chemistry in the University of Pennsylvania in 1818. In 1820 he announced his discovery of the oxyhydrogen blow-pipe, which made him famous at home and abroad. In 1828 he published a compendium of chemistry. In 1818 John Borden published a work on the Elements of Chemical Science. This was the first work of the kind issued in the United States. Dr. Robert Coxe, who was appointed to a professorship in the University of Pennsylvania in 1809, exerted a great influence in the development of pharmacy. He was active in giving lectures to clerks of druggists, and was the originator of the first American school of pharmacy. In 1821 Dr. Jackson was appointed professor of materia medica in this school, and was the first to occupy such a chair in this country. George B. Wood was made professor of chemistry, and was followed by Dr. Bache.

Together, these two gentlemen published the United States Dispensatory in 1826. Dr. William Proctor, however, contributed more to the growth of pharmacy than any other American of the century. The second school of pharmacy was established in New York in 1829.

Dr. Wormley next reviewed the contribution of Americans to chemistry and materia medica. Bloodroot was discovered in 1803. The alkaloid sanguinaria was first isolated in 1828. Lobelia inflata was another indigenous production, a species of tobacco, and a remedy among the aborigines. Proctor isolated from this plant a liquid alkaloid as its principle. The next native remedy was hellebore, or veratrum viride. The Indians used to select their chiefs by its means. The Indian who could bear the largest quantity was made chief. The speaker then referred to veratria, complimenting Dr. H. C. Wood, Jr., for his valuable experiments with the same. In 1831 Guthrie, of New York, mixed lime and alcohol, and so discovered chloroform, though he gave it another name. At this time it was called chloric ether. It was discovered in various places in this country and abroad at about the same time, and received various names. Dumas finally discovered its true character, and gave it the name of chloroform. In 1776 Priestley discovered nitrous oxide, and gave it the name of diphlogisticated oxygen. Davy was the first to inhale it and to discover its power. In the United States it was for years used as "laughing gas" for popular amusement. So at first was ether. In 1844 Horace Wells, of Hartford, inhaled nitrous oxide gas, and had a tooth extracted without pain while under its influence. In 1846 Dr. Morton, of Boston, began experiments with ether in the Massachusetts General Hospital under Dr. John C. Warren. James Y. Simpson, of Edinburgh, a year later introduced chloroform into general use. Thus Davy's idea of anæsthesia in 1800 was realized by the introduction of nitrous oxide gas in 1844 by Wells, of ether in 1846 by Morton, and of chloroform in 1847 by Simpson.

In 1869 Austin Flint, Jr., wrote a paper on the Excretory Function of the Liver, which took a prize in Paris. Cholesterine was then discovered.

Toxicology. — Before the present century little was known of poisons, save their deadly effects. In regard to arsenic, Professor Wormley said that as late as 1824 Christison declared all the known tests for this poison to be unsafe and unreliable. He then gave the history of the various tests for arsenic which are now so well known, so delicate, and so reliable. In 1824 Robert Hare made the first color test for opium, namely, by the per-salts of iron, which strike a blood-red color with meconic acid. Strychnia and the tests for this poison were next referred to.

Professor Wormley then alluded to the report of Professor George F. Barker of the trial for poisoning by strychnia, in which remarkable symptoms were developed. Various papers on digitalin, atropia, and

woorara were then noticed, especially those upon the latter poison by Hammond and S. Weir Mitchell. Dr. Mitchell's famous experiments with and paper on the Venom of Rattlesnakes then received complimentary mention; also his striking discovery of the insusceptibility of the pigeon to opium, from which were evolved novel results, for Dr. Mitchell discovered that, while the pigeon could bear huge doses of opium, the alkaloid narcotina was found fatal to this bird. The contrary effect was observable in man.

RECENT PROGRESS IN THERAPEUTICS.

BY ROBERT AMORY, M. D.

Alcohol.[1] — In the first of these papers Dr. Brunton presents the action of alcohol on the blood corpuscles: on the white corpuscles by first increasing and then diminishing their amœboid movements, and on the red corpuscles by lessening their power of giving off oxygen. It is not easy to state what effect upon the system the change in the amœboid movements may induce, but it is easy to conceive that the above-named action on the red corpuscles will diminish the oxidation of tissues, and hence interfere with its *constructive metamorphosis.* "Now both the functional activity of organs and the production of heat in the body depend on the processes of oxidation within them, and it is obvious that any interference with these processes is not likely to be beneficial so long as they going on in a healthy way and not too rapidly." Moreover, if fat-producing materials be taken into the system along with alcohol, the result will be to increase the deposit of fat under the skin, and if the alcohol be taken in excess, fatty degeneration of the organs will also occur. In fever this property which alcohol possesses of diminishing oxidation is very useful, for it retards an increasing temperature and thus prevents destructive metamorphosis, which latter effect a high temperature will produce, without necessarily increased oxidation, as in pyrexia.

Dr. Brunton then discusses the mooted question whether alcohol undergoes oxidation in the body, and reviews the experiments and observations noted to date. He says, "From a survey of all the evidence on this subject, I think we may conclude that, in moderate doses, alcohol undergoes combustion in the body, and will supply energy, yield warmth, and tend to sustain life in the same way that sugar would do, and is therefore to be reckoned as a food. At the same time it has a power of diminishing oxidation, which prevents its employment as a food to any great extent in health, but greatly increases its utility in disease."

[1] Dr. T. Lauder Brunton, Practitioner, February, 1876. Dr. B. W. Richardson, Lancet January, 1876.

With regard to its effect upon the endurance of man in muscular exercise, Dr. Brunton says, "If he only requires to make a single effort and can rest afterwards until he has replaced his exhausted store, the additional temporary strength obtained by using alcohol may enable him to overcome an obstacle which would otherwise have baffled him, but if he has to make prolonged exertions alcohol is injurious." He deduces this law from Professor Parkes's record of the exertions of soldiers in the Ashantee war.

In Dr. Richardson's paper, after reviewing in chronological order the opinions of others upon the use of alcohol as a stimulant in disease, the author attempts to study its medicinal action by the use of recent light derived from a study of the physiological action of alcohol. We must give Dr. Richardson the credit of his own saying that he had no prejudice against alcohol as a remedy when he began his studies, but we cannot refrain from remarking that his prejudice must have commenced soon after that time. He considers that persistent dyspepsia, flatulency, irregular action of the bowels, hæmorrhoids, excessive exhaustion under moderate physical exertion, and great mental depression under slight mental disturbances, extreme nervous excitability, etc., "are in nearly every instance caused by alcohol, and that the only successful treatment is total abstinence." Every physician will admit that these symptoms may be the effects of chronic alcoholism and dram-drinking, but how many cases with these same symptoms may be found in persons who drink no alcohol? Dr. Richardson would go further: "The phenomena described are the symptoms of alcohol when it is taken in what is commonly presumed to be a moderate . . . . quantity."

He next attempts to prove that acute hæmorrhage is made worse by the use of an alcoholic stimulant, and in chronic hæmorrhages he would absolutely withdraw the use of alcohol. "In the treatment of hæmoptysis it has been my practice at every stage of my medical career to enforce abstinence from alcohol as a part of the treatment."

It does seem as if Dr. Richardson did not weigh with sufficient care the results of experiments and clinical experience of other men of modern times.

Iron as a Reconstructive Agent.[1] — M. Dujardin-Beaumetz is not a believer in the therapeutical virtues of iron in anæmia and chlorosis. Notwithstanding the existence of a lessened quantity of iron in the blood of anæmic and chlorotic patients, he says that this diminution is of very little consequence, being ten to twenty centigrammes, at the most, of the total amount of two grammes of iron contained in five litres of the blood of an average-sized adult. Now, according to Boussingault, the daily food introduces into the body ten to twenty centigrammes of iron; consequently, the loss of iron may be made up by

[1] Société de Thérapeutique, Paris, Séance de 26 Avril, 1876.

the food alone. Therefore, instead of supposing the mineral tonics to replace directly what the blood lacks, it is much easier to believe, he says, that these act in anæmia simply as stimulants; and in order to enrich the blood we should have recourse to those medicinal agents which excite nutrition.

In young girls M. Beaumetz is much better satisfied with gymnastic exercise and hydrotherapy than with ferruginous medicines. Moreover, if the latter are oftener powerless in chlorosis, they produce harm by disturbing the digestive functions. Arsenic is of more value than iron.

M. Moutard-Martin, at the same meeting, considered that ærotherapy, in the form of baths in compressed air, was even better than the hydrotherapy proposed by M. Beaumetz.

Guarana in Headache.[1] — This remedy is contra-indicated in that form of headache which is chronic, because it increases arterial tension by excitement of the heart, and elevates the temperature by exaggerated oxidation. Even after its use in neuralgic headache, phenomena of its poisonous action may be observed from the appearance of a *malaise* more distressing than the headache which has disappeared under its remedial agency. A certain patient suffering from a facial paralysis due to a central lesion took guarana with the effect of producing redness of the face, staring eyes, slight irregularity of the pulse, moisture of the skin, delirium, dullness of hearing, and vesical and intestinal spasms. Dysuria is a frequent phenomenon.

Farinaceous Diet versus Nitrogenous Diet in Epilepsy.[2] — Dr. Merson gives an account of the treatment in twenty-four cases of chronic epilepsy by two different kinds of food, one of which consisted very largely of nitrogenous material, and the other contained no animal food, but consisted of milk (?), arrowroot, potatoes, bread and butter, and oatmeal. Twelve patients were allowed nitrogenous and twelve others farinaceous food, and all were kept under observation for four weeks. The physical and mental condition, together with the number of fits, were carefully and daily noted. At the end of four weeks the weight of each individual was taken for the second time (the first having been recorded before the above dietetic *régime*), and then the diet of those who had been fed with the farinaceous food was changed to a nitrogenous diet, and those who had received nitrogenous food were allowed only the farinaceous diet. After another four weeks the weights were again taken, and all the patients were then allowed to resume their ordinary dietary. From a review of the whole evidence furnished by his observations, Dr. Merson concludes that there are fair grounds for the deduction that farinaceous food is more suitable for epileptics than a mixed or nitrogenous diet.

[1] Wurm, Würtemb. Corresp.-Bl., xlv. 30, 1875.

[2] West Riding Reports, and Dublin Journal of Medical Science for May, 1876.

Ergotin in Mania.[1] — Van Andell reports his experience with the hypodermic use of ergotin in certain cases of acute mania, as, for instance, in those which suddenly become maniacal after premonitory and slight indications of impending insanity, as denoted by restlessness of mind and body. Having noticed that a congestion of the head, reddening of the face, forcible pulsation in the carotid arteries, injection of conjunctivæ, contracted pupils, were prominent symptoms, he is disposed to attribute all these to a hyperæmia of the cerebral vessels and membranes. Van Andell considers opium and its derivatives especially contra-indicated under such circumstances. In private practice, where these cases most often occur, the use of prolonged baths is impracticable. The use of tartar emetic, which would fulfill the indications, is contra-indicated on account of its injurious effects on the organs of digestion. Having observed that the experiments of Brown-Séquard and Hermanides demonstrate that ergot causes a contraction of the cerebral vessels and induces anæmia of the brain, Van Andell employed ergotin by hypodermic injection. As the result of his clinical observations he records a diminution of excitement, ravings, and outcries, and states that frenzy gradually ceased. Though still insane, the patient became more manageable, and sometimes fell into a refreshing sleep. In one case only was the injection followed by local abscess. In the other cases ergotin was quickly absorbed, or a circumscribed swelling appeared, which was slightly painful on pressure, but which gradually subsided.

Domestic Dosage of Medicines.[2] — Dr. Farquharson by direct experiment has discovered that although the drop is generally considered as equal to a minim, its variations are very wide, namely: —

56	drops of	distilled water	= 60 minims.
113	"	" tinct. opii	= 60 "
114	"	" tinct. digitalis	= 60 "
100	"	" liq. morph. hydrochlor.	= 60 "
80	"	" oxymel scillæ	= 60 "
75	"	" syrup. papaveris	= 60 "
45	"	" glycerine	= 60 "
114	"	" spts. ætheris nitrosi	= 60 "
112	"	" tinct. camph. comp.	= 60 "
55	"	" acid. sulph. dil.	= 60 "
.55	"	" olei ricini	= 60 "
110	"	" spts. terebinth.	= 60 "
100	"	" ol. anisi	= 60 "

The shape of the bottle also influences the size of the drop, but not to the same extent as the nature of the liquid. Moreover, the capacity of tablespoons (usually estimated at half a fluid ounce) varied from five to eight drachms; that of dessertspoons from four to six drachms; that of teaspoons from eighty minims to two drachms.

[1] Allgemeine Zeitschrift für Psychiatrie, Band xxxii., Heft 2, and Dublin Journal of Medical Science for May, 1876.

[2] British Medical Journal, February 26, and London Practitioner, May, 1876.

Hydrochlorate of Apomorphia.[1] — Dr. Jurasz, observing how difficult it has been to obtain pure apomorphia, made some experiments with this drug in order to establish the indications for its use. As an emetic it possesses similar properties to tartar emetic and more certain action than ipecacuanha, and can fulfill the indications in cases of difficult swallowing and in that kind of impeded respiration which can be easily relieved by the act of vomiting. Its administration by subcutaneous injection is the most effective, and no local ill effects follow its use in this way; if, however, the dose be too small, no effect will be noted, and, if too strong, violent vomiting, followed by symptoms of collapse, will occur in young children; yet the collapse is not so great as that induced by the tartrate of antimony and potassium. In a few moments after its introduction, headache, faintness, and præcordial distress will follow, and these result in vomiting. After the completion of vomiting sleep ensues, with symptoms of collapse, salivation, and sweating, and in younger children the effects are more rapid, with the production of pallor, apathy, and coldness of the surface of the body. As a rule, all disagreeable effects of the drug disappear in two hours. Its use is of especial benefit in adults suffering from dyspnœa, severe bronchitis, and emphysema. While modifying the mucous secretion and acting powerfully and readily, it does not increase the expiratory efforts as do senega, benzoin, and ammoniacal preparations, but it facilitates the discharge of mucus from the air-passages in much the same way as ipecacuanha and tartar emetic. Dr. Jurasz used a one per cent. solution, in the dose of a tenth of a grain, with children of the age of ten years.

(To be concluded.)

MEETING OF THE INTERNATIONAL MEDICAL CONGRESS.[2]

Wednesday's Proceedings (*concluded*).

Section of Dermatology and Syphilology. Prof. Freeman J. Bumstead, of New York, read his paper on the Virus of Venereal Sores, its Unity or Duality, to an interested audience.

The term "virus" is here understood in the broad sense of contagious principle or poison.

Bassereau, in 1852, by means of the "confrontation" of patients, established the existence of two diseases, one local and the other constitutional, in the complex affection before known as syphilis. He was followed by a school of dualists, who claimed for the local sore (as well as for the constitutional disease) a specific virus of its own, incapable of generation *de novo*. This claim was overthrown by the experiments of Henry Lee, Boeck, and others, who showed that the secretions of syphilitic lesions could be auto-inoculated with

[1] Deutsches Archiv für klin. Med., Bd. xvi. 1.

[2] Continued from page 332.

the effect of producing chancroids. The assumption, in reply, by the dualistic school of a "mixed chancre," containing two kinds of specific virus, proved insufficient. Henceforth, the existence of a specific virus belonging to the chancroid must be abandoned.

The same experiments were also supposed to prove the transformation of the syphilitic into the chancroidal poison. This conclusion, however, was too hasty. Together with the secretions of syphilis, the products of simple inflammation had been inoculated; if these alone would produce the same result, then they were the guilty factor. That such is the case is proved by the experiments of Dr. Edward Wigglesworth, Jr., of Boston, performed in 1867–68, although not hitherto published, and by the more recent ones of Kaposi and others, whereby it is shown that the inoculation of simple pus will produce pustules and ulcers, re-inoculable in generations, and bearing every characteristic of the chancroid. While adhering, therefore, to the doctrine that the poisons of syphilis and the chancroid are distinct, the reporter rejects the idea that the chancroid has a specific virus of its own, and believes it to originate in inoculation of the products of simple inflammation. His conclusions were stated as follows: —

(1.) The virus of venereal sores is dual.

(2.) Venereal sores may be due to the inoculation of the syphilitic virus and also to the inoculation of the products of simple inflammation.

(3.) These two poisons may be inoculated simultaneously.

Prof. James C. White read a valuable report on the Variations in Type and in Prevalence of Diseases of the Skin in Different Countries of Equal Civilization. The opinions presented by Dr. White upon this subject were based upon the analysis of five tables which he had prepared: (1) showing the comparative occurrence of the more common diseases of the skin in twenty thousand consecutive cases in American dispensary practice; (2) showing the relative occurrence of the more common skin diseases in dispensary and private practice in Boston; (3) showing the comparative prevalence of these affections in American and European dispensary and hospital practice; (4) their comparative prevalence in European and American private practice; and (5) the relative prevalence of some of the rarest forms of disease in America and Europe.

The following propositions were offered as warranted by the data therein presented: —

(1.) Certain obscure affections, the ætiology of which is little understood, may be regarded as wholly absent from America. Of such are prurigo, pellagra, etc.

(2.) Certain diseases connected with poverty and uncleanliness are less prevalent in the United States than in Europe. Examples of this class are the animal parasitic affections.

(3.) Some cutaneous affections of grave character, and dependent upon serious constitutional disorders, are of less frequent occurrence and of milder type amongst us than in Europe. Lupus, the syphilodermata, and leprosy are the most marked instances of this class.

(4.) Certain disorders of the skin, especially those of its nervous and gland-

ular systems, are more prevalent with us than in Europe; the most notable examples being herpes, urticaria, pruritus, seborrhœa, acne, etc.

Section on Obstetrics. Dr. Washington L. Atlee read his paper on the Treatment of Fibroid Tumors. It was fully discussed, Dr. Kimball, of Lowell, taking part.

The conclusions of Dr. Wm. Goodell's paper, on Tuesday, namely, The Mechanism of Natural and Artificial Labor, were as follows:—

Regarding then the mechanism alone of labor in narrow pelves, to which the scope of this paper is strictly limited, the following conclusions are arrived at:—

(1.) The unaided first-coming head and the aided after-coming head observe in a flat pelvis precisely the same general laws of engagement and of descent. Hence version here means art *plus* nature.

(2.) The forceps, however applied in a flat pelvis, antagonizes more or less with the natural mechanism of labor. Hence the forceps here means art *versus* nature.

(3.) The aided and the unaided first-coming head observe in a uniformly narrowed pelvis precisely the same laws of engagement and of descent. But version violates these laws. Hence, the forceps here means art *plus* nature; version, art *versus* nature.

(4.) That at or above the brim of a flat pelvis, the fronto-mastoid, or even the fronto-occipital, application of the forceps interferes less with the molding of the head, and violates the natural mechanism of labor less than the biparietal application.

(5.) In the flat pelvis, the vectis aids the natural mechanism of labor, and therefore meets the indications better than the forceps.

Thursday's Proceedings.

Dr. Bowditch offered some resolutions declaring the importance of the work done in the surgeon-general's office, regretting that appropriations were inadequate, and providing that a committee of three be appointed to memorialize Congress. The resolutions were adopted.

In the report of the Section on Surgery, the following propositions, offered by Dr. Van Buren, were adopted:—

Tufnell's treatment of aneurism by rest, position, and restricted diet offers a valuable resource in thoracic and abdominal aneurisms.

It should always be tried in innominate, subclavian, subclaveo-axillary, and iliac aneurisms before resorting to measures attended by risk to life.

For aneurisms of the subclavian and iliac arteries the Hunterean operation, with our present means of preventing secondary hæmorrhages, is not justifiable.

For reasons formally set forth by Holmes and Henry Lee, the "old operation" cannot properly be substituted for the Hunterean operation in these cases, but should be held in reserve for special cases.

It is the most safe surgical resource in gluteal aneurism, if the circulation can be commanded by the hand *in recto*.

The mode of cure by embolism aimed at in the method of manipulation is a not infrequent explanation of what is called spontaneous cure of aneurism.

The value of Esmarch's bandage in the treatment of aneurism is probably not fully estimated.

In view of the promising features presented by the cases of Levis and Bryant, in which horse-hair was introduced into an aneurismal tumor, the repetition of this operation, or the substitution for horse-hair of Lister's prepared catgut, or other animal substances, may be properly tried.

The Section on Medicine reported the following resolutions: —

On the question, "Do the conditions of modern life favor specially the development of nervous diseases?" reported by Professor Bartholow, of Cincinnati, Ohio, the section voted "that the paper of Professor Bartholow be referred to the congress with a recommendation that it be published in the transactions, but without an expression of the opinion of the section on the question involved."

On the paper of Dr. W. B. Neftel, of New York, entitled The Ætiology of Epilepsy, the section voted "that the paper be referred to the congress for publication."

The Section on Mental Diseases reported the following conclusions of C. H. Hughes, M. D., of St. Louis, on the question of Simulation of Insanity by the Insane: —

"It is not only not impossible for the insane to simulate insanity for a purpose in any but its gravest forms of profound general mental involvement, but they actually do simulate acts and forms of insanity for which there exists no pathological warrant that we can discover in the real disease afflicting them."

The report of the Section on Biology was merely a list of three papers read before that section by Professor Radner, of St. Petersburg, and one by Dr. J. G. Richardson, of Philadelphia.

In the Section on Dermatology and Syphilology the afternoon was mainly occupied by the reading and discussion of Dr. E. L. Keyes's paper on the Treatment of Syphilis, with special reference to the constitutional remedies appropriate to its various stages, etc. Some of the points made by Dr. Keyes were: —

"We do not claim that mercury cures syphilis, but that it removes certain elements of the disease. Iodine not only aids mercury, but does not yield a hair's breadth to any other form of treatment. Iodine does not require prolonged use. Mercury is not debilitating, but tonic in small doses, and may be taken for a long time. Cases treated from the beginning with mercury do not reach the third stage. Continued treatment may be kept up two and a half to three years, and should be continued for six months after the disappearance of symptoms. Many patients treated at the Bellevue Hospital become cured, marry, and have healthy families.

In the Section on Medicine an interesting but very lengthy paper on the Influence of High Altitudes on the Progress of Phthisis was read by Dr. Denison, of Denver, Col.

The Section on Surgery enjoyed a field day in the discussion of Dr. Sayre's paper of the day before. It will not soon again happen that Professors Gross and Agnew of Philadelphia, Dr. Campbell of Georgia, Dr. Brodie of Detroit, Dr. Post of New York, Dr. Hingston of Montreal, Mr. William Adams of

London, Mr. Lister of Edinburgh, Dr. Sayre of New York, Dr. Moore of Rochester, Dr. Robertson of Ontario, Canada, and others will engage in so earnest a discussion.

To give more than an outline of a two hours' debate would require too much space.

Professor Gross opened the discussion by saying that he could not agree with the second conclusion of Dr. Sayre's paper (that coxalgia is almost always traumatic in origin, and is not necessarily connected with a strumous constitution). He thought this an error. He always asks concerning a coxalgic patient, "Has this child received a blow, a fall, a contusion?" The general answer is *No.* We are safe in saying that inquiry in the majority of cases would thus result. Doubtless coxalgia is sometimes the result of injury, but not necessarily so. Coxalgia *cannot* occur in a child not laboring under constitutional degradation. It is as impossible as the occurrence of consumption without a forerunning debility. In case of abscess, what is the character of the pus which follows the knife? Manifestly it is strumous, like the sputa of phthisis. Turning to Sayre, Gross asked, "Have you ever seen any other kind of pus issuing from a diseased hip-joint?" "No," replied Sayre. "That settles this point, then, and shows the constitutional condition of the patient. It occurs at the hip-joint because that is the weakest part of the child, or it arises because of suppression of cutaneous perspiration. It may be hereditary. One or more members of the patient's family will be found to be consumptive, to have had caries of the spine or of the bones or a syphilitic taint. I maintain that the part is in a predisposing condition. Unless this predisposition exists, I believe coxalgia is not liable to arise."

Dr. Campbell, of Georgia, said: "I believe coxalgia is frequently due to traumatic cause. It has been my experience that the child has had a fall or some injury. But the fall or injury would *never* have caused such a disease in a healthy child. Scrofula is invariably present. It is a manifestation of general vice of constitution. While I fully agree with Dr. Sayre in his objection to too early operative interference, and although his views have helped me, I cannot agree with him in regard to coxalgia in healthy children. It is a manifestation of constitutional taint, syphilis, or scrofula."

Dr. Hingston, of Montreal, said: "It is difficult for us to depart from early teaching. Until within twelve years I believed that coxalgia was strumous. Since then I have changed my opinion. In twenty-nine cases collected by me I believe I traced twenty-six to traumatic injury. In six children of the same parents and grandparents, one becomes afflicted with coxalgia; not the unhealthy child of the six, but the healthiest, the child who is most active in climbing, falling, etc. So soon as this child can run about without aid it takes care of itself, but before this, from its activity, is apt to fall and become injured. Is the cause traumatic or constitutional? If traumatic, what need of constitutional treatment? if constitutional, what need of surgical appliances?"

Dr. Moore, of Rochester, N. Y., said: "My firm conviction is that this particular joint becomes affected because it is small in comparison with other joints, as the knee or the ankle. It is not much larger than the elbow or shoulder joint, and much more exposed to strain, and is gripped by big muscles, which

in case of injury become rigid, thus holding the joint almost immovable. I do not believe in hereditary taint. I think Pott's disease is a cause, not a symptom, of consumption."

Mr. Adams, of London, said: "I believe coxalgia has a traumatic origin, and that it is an affection of the round ligament. We seldom see recent coxalgia in post-mortem cases, but Axel Key found the round ligament (post mortem) slightly inflamed and some serum in the joint. In another case similar conditions were found, but no bone disease. There may be two causes of coxalgia; (1) irritation and inflammation of the round ligament; (2) bone disease. This is the opinion of Axel Key."

Dr. Agnew, of Philadelphia, said: "I believe it probable that a slight injury from a fall, a trip, a twist of the joint, generally starts the inflammation, but behind and beyond all I believe there is constitutional taint."

Dr. Brodie, of Detroit, said: "My opinion is that the disease starts in the cartilage and develops therefrom."

Mr. Lister, of Edinburgh, said: "Whether the disease be constitutional or not has no bearing on the treatment. Take a case of cancer. We admit it to be constitutional. If removed by operation, even the local manifestations disappear. How many patients there are who live to be healthy after struma of the cervical glands. If we admit scrofula at all, we must admit that it exists in coxalgia. As to the efficacy of treatment, in Edinburgh we make cures in the majority of cases."

In the discussion on coxalgia, Dr. Sayre asked, If there be constitutional taint, how can we, how do we, cure by rest and local treatment without a grain of medicine? How do we cure without constitutional treatment?

He then quoted a case in which, six years ago, he performed exsection on a girl whose joint had suppurated for years, and whose life was at the very lowest ebb. The case recovered perfectly without taking a particle of medicine. In answer to the question, Why is there sometimes congenital luxation of the femur without coxalgia? he said that he did not believe there ever was a case of congenital luxation, and thought the term a misnomer. The apparent luxation is only a lack of development of the head of the bone.

Dr. Sayre's propositions were finally accepted.

Friday's Proceedings.

The business session of the International Medical Congress was resumed at ten o'clock this morning at the University of Pennsylvania, with Professor Gross, the president, in the chair. It was announced by the secretary that the register contained the names of four hundred and eighty delegates.

After the proper reference of reports from the various sections, Dr. N. S. Davis, of Chicago, offered the following: —

Whereas, This congress marks an era in the history of medicine in the United States of America, the addresses delivered presenting a summary of progress in the various departments which will be of great historical value in all coming time; and

Whereas, It is highly probable that these addresses, in connection with the many very valuable papers read and discussed in the sections, will require for

their early and proper publication more money than will be in the hands of the treasurer for that purpose; therefore

Resolved, That the committee on publication be authorized and instructed, as soon as practicable after the final adjournment of the congress, to ascertain the probable cost of publishing the full transactions in a style appropriate for the work; and if the money on hand is found deficient, they shall address a circular letter to each American member of the congress asking for such additional sum, not exceeding ten dollars for each of such members, as will supply the deficiency; and that said committee be authorized to withhold the volume, or volumes, when published, from any member who may neglect or refuse to pay the additional sum required.

Resolved, That the committee on publication be authorized and requested to exercise a careful and liberal discretion in preparing and revising the proceedings and reported discussions in the several sections for publication in the transactions of this congress.

The resolutions were adopted.

The Sanitary Section yesterday adopted the following propositions appended to the paper by Dr. Henry Hartshorne upon the Disposal and Utilization of Sewage: —

(1.) Every plan for the laying out or extension of a city or town should have, as an indispensable part of it, a corresponding or co-extensive plan for the continuance or substitution of the natural drainage of the locality, and for the proper construction of a system of sewers.

(2.) The question in regard to the removal of waste and impurities from towns is not as to the maintenance of sewers, but as to whether they should be depended upon alone, or should be supplemented, more or less largely, by other measures of conservancy.

(3.) Every sewer not supplied with a sufficient flow of water to secure the transportation of its contents is a nuisance intensifying the evils it ought to remove. Ventilation of sewers will mitigate but not entirely correct such evils.

(4.) Conditions sufficient for sanitary security are afforded by the discharge of sewage at a considerable distance from a town into the sea or into a large and rapid river of which the water, at least for many miles below the exit of the sewers, is not used for drinking.

(5.) The earth-closet method of removal of excreta is, theoretically and practically, satisfactory in a sanitary aspect, the obstacles to its general adoption belonging only to economy and convenience.

A proposition offered, which affirmed that the sewage irrigation of arable land, well underdrained, is, when practicable, the most economical method of disposal of sewage, and that it is free from well-grounded sanitary objections, was not concurred in by the section, which declined to express an opinion upon that subject, and considered it still open to investigation.

A memorial from the Women's National Temperance Union was received, calling the attention of the congress to the subject of intemperance, and was referred to the Section on Medicine.

The communication received on Wednesday from the American Temperance

Association, and which was then laid on the table, was taken up and subjected to a like reference.

One of the sections presented the following suggestions by Dr. Woodworth, Supervising Surgeon-General United States Marine Hospital Service, relative to the subject of quarantine: —

Quarantine should embrace general sanitation applied to the endemic homes of the infectious diseases, to ships, and to the exposed places. It is impracticable to apply a uniform system of quarantine to all places without reference to differences of geographical condition and climate, the commercial relations of the countries concerned, and the specific character of the disease to be combated. Hence the measures enforced should be modified to meet the requirements of each case, taking into account the liability to infection of the port threatened, the period of incubation of the disease, the length of time consumed in the passage of the vessel, and the sanitary measures enforced on board during the voyage. If these latter are recognized by the health authorities as they should be, this would furnish a strong incentive to proper ship sanitation — a most important aid in the exclusion of cholera and yellow fever. The consular officers of the government should assist by giving timely warning of the outbreak of the disease and of the sailing of suspected vessels. The thorough disinfection of infected articles should be insured, while it must be borne in mind that disinfectants are not so much needed as cleanliness, and that their value depends in a great measure upon the manner of their application.

Dr. Woodworth maintains that by applying to the sanitary supervision of ocean trade and traffic such practical measures as are indicated by experience, the hindrances to commerce will be lessened and greater security against the introduction of cholera and yellow fever afforded.

At eleven o'clock Dr. John P. Gray, superintendent and physician of the New York State Lunatic Asylum, Utica, N. Y., proceeded to read a paper on Mental Hygiene. He took up the subject, dwelling upon it from individual, national, and social points of view.

An address on Medical Literature was next read by Lunsford P. Yandell M. D., late professor of physiology in the University of Louisville, occupying nearly an hour, and at its conclusion the addresses read yesterday, as well as those of to-day, were on motion referred to the committee on publication.

Prior to adjournment, which took place at one o'clock, it was announced that an invitation had been extended the congress to inspect the Medical Department of the University, the University Hospital, and the Pennsylvania Hospital.

In the Section on Sanitary Science Dr. Ezra M. Hunt, of New Jersey, read a paper on The Present Relations of Pharmacy to the Medical Profession, and the following conclusions were adopted: —

(1.) The interests of society and of the medical profession render it desirable that the furnishing of medicine should be surrounded with greater safeguards.

(2.) There are reasons why pharmacy should be regarded as a specialty within the precincts of the medical profession.

The Section on Medicine referred the paper of Dr. Charles Denison, of Denver, Col., on The Influence of High Altitudes on the Progress of Phthisis, but without an expression of opinion on the part of the section.

Dr. Squibb read a paper on An Universal Pharmacopœia.

Section on Dermatology and Syphilis. In regard to the question previously referred to, Are eczema and psoriasis local diseases, or are they manifestations of constitutional disorders? the following conclusions were reported: —

(1.) Eczema and psoriasis are distinct diseases; the former is to be closely distinguished from artificial dermatitis, and the latter from the eruptions of syphilis, scaly eczema, and leprosy.

(2.) Eczema and psoriasis cannot own a double causation or nature, at one time local and at another constitutional, but with other diseases may have a twofold cause, a predisposing and an exciting one.

(3.) Eczema and psoriasis in many of their features resemble the accepted constitutional diseases more than they do those recognized as local.

(4.) Eczema is most properly likened to catarrh of the mucous membranes; it is very probable that some attacks called catarrhal are eczema and psoriasis of the mucous tissue.

(5.) Both eczema and psoriasis resemble gout and rheumatism in certain respects, and are dependent upon a somewhat similar, though as yet unknown, constitutional cause; much of the skin-lesion must be looked upon as the local result or remains of the diseases.

(6.) There as yet exists no microscopical or physiological proof that eczema and psoriasis are the sole result of local cell-disorder, either congenital, acquired, or due alone to perverted nerve action.

(7.) Local causes play a very important part in the ætiology of eczema; they are probably inoperative in psoriasis.

(8.) Local treatment alone is often insufficient to remove the lesions of eczema and psoriasis, and it cannot prevent or delay relapses. Its success does not necessarily demonstrate the local nature of the affections.

(9.) Constitutional treatment alone and singly can cure many cases of eczema and psoriasis, and can prevent or delay relapses in a certain proportion of cases; under constitutional treatment is included every agency which cannot properly be classed among local measures.

(10.) The total weight of evidence and argument is that eczema and psoriasis are both manifestations of constitutional disorders, and not local diseases of the skin.

The conclusions of Dr. Charles H. Nichols, of Washington, D. C., Superintendent of the Government Hospital for the Insane, in his paper entitled The Best Provision for the Chronic Insane, were as follows: —

That provision for the chronic insane should be made by constructing buildings in connection with the several hospitals for the insane.

That it is not desirable to construct institutions solely for the care of the chronic insane.

The section accepted and approved the above. With regard to the number of patients that may be most advantageously accommodated in one institution, there was some difference of opinion in the section.

Section on Biology. We give elsewhere an abstract of Dr. Harrison B. Allen's interesting paper which was read before this section.

The section work to-day was less active than on preceding days.

The most attractive paper was probably that of Mr. William Adams, of London, whose subject was Subcutaneous Division of the Neck of the Thigh Bone. Mr. Adams not only read a most instructive paper, but by means of a pelvis and femur he demonstrated his operation, showing and using the peculiar saws which he has invented for this operation. The incision is to be made at right angles to the long axis of the neck of the bone, but before the knife enters the tissues the surgeon must be certain that he knows just the position of the head of the bone. If the direction of the bone be not carefully calculated, serious error might result. Out of twenty-three cases of this operation, five of which were performed by Mr. Adams, one death only resulted from the operation, and this was in the case of a very strumous boy eight years of age, whose joint was not in condition for operation. One of Mr. Adams's cases, that of a girl, was followed by deep-seated suppuration, and the patient died eight months after the operation. He asserted, therefore, that the operation is a safe one, and that danger may be kept within very narrow limits by care in the choice of the *time of the operation*. The bone remains natural in size. In children who are not strumous but little caries results. The operation was originally limited to adults whose hip-joints were anchylosed, but now all children are operated upon. When the neck of the bone cannot be operated upon because of the destructive effects which it has suffered, then the operation should be division of the shaft just below the small trochanter. Cut from without inward, placing the flat of the knife against the femur, then turn the edge and cut down to the bone. After this introduce the saw in the same way, namely, with the flat of the blade against the bone until the requisite depth is reached, then turn the teeth against the bone and "wriggle" through, and a good joint will be obtained. Mr. Adams prefers his saw to the chisel, which is apt to jump and be uncertain.

The long bones can be divided in this way anywhere. Mr. Adams's saw has a powerful handle, precisely like the butt of a pistol; the blade is straight, narrow, and strong, the teeth occupying a length of only about one and a half or one and a quarter inches. Anchylosis may occur, but there may also be free motion for a year after the operation.

Dr. Post, of New York, remarked that American surgeons are under a debt of gratitude to Mr. Adams for his operation, and for the benefit which he has thus conferred on science. His results are highly satisfactory. Dr. Post quoted a case, in which he made use of the Rhea Barton procedure, which was followed by gangrene. The post-mortem examination found the artery twisted around the short fragment. It was the first occurrence of such an accident, and he mentioned it to call attention to what might happen after this operation.

A delegate from Iowa then said he did not wish to take any glory from Mr. Adams, but felt he must refer to a case which came into his hands twenty years ago, and in which there was shortening by fracture. He knew that by the Rhea Barton operation he could get straightening, but not elongation of

the bone. After consulting every surgical work at his disposal, and securing the sanction of his medical society, he undertook his own operation. A large needle of soft iron attached to a chain-saw was passed close around the bone, and out at the aperture of entrance. Then the bone was cut through, and by subsequent treatment was lengthened, and the patient grew up to manhood with a leg which allowed him to enlist as a soldier in the late war.

Prof. Joseph Pancoast remarked that it seemed to be thought that Rhea Barton in dividing the femur took out a section of bone. He did not do this, but simply cut through with his own saw, and thus got a useful false joint. Professor Pancoast did not add, as he ought to have done, that he himself was the inventor of the removal of wedge-shaped sections of bone for the cure of deformity in the leg caused by anchylosis.

Dr. Sayre asked Mr. Adams how long he continued extension after his operation, and when he began it.

Mr. Adams said that he began extension on the fourth day and kept it up three or four weeks, but that every week he chloroformed his patient, removed the dressings, and set up passive motion for a time. This is done in order to prevent anchylosis.

Dr. Sayre said that in his cases he set his saw just above the small trochanter, cut upward, then outward, and then downward, following a general curve. He next cut through the bone again, taking out a section, thus making a good joint. Though he found Adams's operation much better, still he thought it would be an improvement to keep up more motion, and that we could finally get and preserve mobility if we were more patient and persevering.

Dr. Richardson, of New Orleans, related a case in which a washerwoman had dislocated the head of the humerus into the axilla. On moving the bone he broke it. He then pressed the smaller fragment firmly into the glenoid cavity and kept it there. After a few days he began passive motion of the lower fragment. To-day this woman has good motion, and does not even know there has been a fracture.

A question having been raised as to how much the muscles will lengthen under extension, Dr. Moore, of Rochester, said that a student of his made experiments upon muscles and embodied the results in his inaugural thesis, which was published in the *American Journal of the Medical Sciences* for 1857. He found that the small muscles required great force in order to become stretched. For instance, the foreleg of the sheep required a weight of three hundred pounds in order to stretch five eighths of an inch. The experimenter was Dr. Bly. Dr. Moore said it had just occurred to him that, following Mr. Adams's operation, danger of anchylosis might be prevented by applying an extension weight of several hundred pounds to the limb.

A gentleman from Belgium had remarked that in attempting to diagnosticate the condition of a limb in which there was immobility at the hip-joint he almost invariably fractured the femur. In some portions of France this was resorted to as an operation. The femur having been fractured intentionally a correct position could then be obtained. The examination was always done during anæsthesia. The speaker asked Mr. Adams whether he made his preliminary examination under anæsthetics. If not, he thought it easy to fall

into error, for the limb might be apparently anchylosed as a result of rigid muscles, a condition which was always overcome by chloroform.

Mr. Adams replied that he always examined under chloroform; had even tried the fracture as an operation, but did not like it, because he could not be certain of the seat of the fracture. "Sometimes," he said, "I cannot break the bone when I want to do so, and sometimes it breaks when I do not wish it to fracture. The operation of the Iowa gentleman [alluded to above] was certainly a great success." He then said that he should hereafter always adopt Dr. Sayre's suggestion, to make early extension, and that he should enjoin a more frequent use of passive motion, for in this way he believed that we might succeed in preventing anchylosis after the operation.

Prof. Joseph Pancoast, in reply to a question, said that it was Graham, of Chicago, who first used the gimlet in boring in several directions a bone which he wished to fracture. It was then easily snapped at the right place, and deformity at the knee-joint was successfully overcome and the limb perfectly straightened. The popliteal artery is liable to injury.

Mr. Lister said that in Edinburgh anchylosis in a soft condition of the limb was very rare. Patients are not allowed to get into a position in which anchylosis after operation can occur. In regard to the extensibility of muscles, he said that in his own cases he had found forced and prolonged extension a bad procedure. He quoted one case in which the working pulley and a weight of several pounds were used. He thought all was going on well, when at the end of eight weeks, to his great discomfiture, he found the lame limb much longer than the sound one, and of course there was no union. This was abundant proof that the muscles can be stretched. The weight used was about twelve pounds.

This discussion was followed by the reading of a paper on Penetrating Wounds of the Abdomen, with suggestions regarding a change of practice in such cases, by Professor Dugas, of Georgia.

A paper was then read by Dr. Keyes, of Cortland Village, New York, On the Propriety of Opening the Sac in Strangulated Hernia. The writer advocated the operation because of the impunity with which the peritoneum can be cut.

Prof. Joseph Pancoast then carefully explained what his procedure was in strangulated hernia, a mode of operation which avoided the necessity of opening the sac.

Dr. Post, of New York, said that he would as soon perform the Cæsarean section in a case of miscarriage as open the sac of a strangulated hernia when unnecessary.

Mr. Lister said that as it was late and other work was on hand, he thought it would be unfruitful to give further time to the discussion of the paper of Dr. Keyes.

In the other sections less work was done than on previous days. The Section on Biology did nothing. The Section on Medicine listened to and earnestly discussed the papers of Dr. Lebert, Dr. Hunt, and Dr. Howard. In the Section on Obstetrics Dr. James P. White's paper on Chronic Inversion of the Uterus attracted much attention. In the Section on Dermatology

and Syphilis Dr. Engelstet read an exceedingly entertaining and instructive paper on Measures to prevent the Propagation of Venereal Diseases in Denmark.

SATURDAY'S PROCEEDINGS.

The International Medical Congress met again this morning in the University of Pennsylvania, Professor Gross presiding.

Reports were read from the different sections. On the paper of Dr. E. M. Hunt on Alcohol in its Therapeutic Relations as a Food and a Medicine, the Section on Medicine adopted the following propositions, and referred them to the congress: —

(1.) Alcohol is not shown to be a definite food by any of the usual methods of chemical analysis or physiological investigation.

(2.) Its use as a medicine is chiefly that of a cardiac stimulant, and often admits of substitution.

(3.) As a medicine it is not well fitted for self-prescription by the laity, and the medical profession is not accountable for such administration or for the enormous evils arising therefrom.

(4.) The purity of alcoholic liquors is in general not as well assured as that of articles used for medicine should be. The various mixtures when used as medicine should have definite and known composition, and should not be interchanged promiscuously.

Professor White offered the following resolutions, prefaced with appropriate remarks: —

Resolved, That the officers and trustees of the University of Pennsylvania are hereby tendered our cordial thanks for the very liberal use of their excellent buildings for the meetings of this International Medical Congress.

Resolved, That the officers and trustees of the Jefferson Medical College are hereby tendered the cordial thanks of this congress for the use of their lecture-room for the most interesting lecture of Dr. J. J. Woodward, U. S. A.

Resolved, That the Centennial Medical Commission of Philadelphia and the president and other officers of the International Medical Congress of 1876 are hereby tendered the cordial thanks of this congress for the most excellent manner in which its members have discharged the arduous duties devolved upon them, and by which our pleasure and profit have been so much enhanced.

Resolved, That the cordial thanks of the International Medical Congress are especially due to Drs. Thomson, Wilson, and Strawbridge, and to Messrs. H. C. Lea and J. B. Lippincott for their generous hospitality.

Dr. Grant, of Ottawa, Canada, arose and stated that at a meeting of the members of the Canadian medical delegates, held yesterday, the following resolutions were adopted unanimously: —

Resolved, That the Canadian members of the International Medical Congress desire to express their sense of the great consideration and urbanity with which they have been treated by the officers and members of the Centennial Medical Commission, and beg, by this resolution, to tender their warm thanks for the same.

Resolved, That the Canadian members of the International Medical Congress most cordially join with the other members of the congress in thanking

the members, and citizens of Philadelphia, for the generous hospitality extended to its members throughout the present session.

Southern members expressed in warm language their heartfelt happiness in the consciousness that, no matter what may have occurred between the Northern and Southern sections of the country, the medical profession had ever remained a united, kindly brotherhood.

Dr. Sayre, of New York, offered the following: —

Resolved, That this International Congress request our president, Professor Gross, to sit for his portrait, and that the committee of publication be instructed to have the same engraved and printed in the frontispiece to the volume of our transactions.

Dr. Bowditch presented this resolution: —

That we, a brotherhood of physicians from the North, South, East, and West of this country, hereby tender to our associates from other lands our most earnest wishes that they may have safe and happy returns to their homes, and we would suggest the hope that they will carry back many pleasant memories of this fraternal meeting now closing, and which has been most appropriately held in this generous and noble city of Philadelphia.

Professor Charles J. Hare, of England, read the following expression of congratulation from the delegates of Great Britain: —

The delegates from Great Britain to the International Medical Congress at Philadelphia beg to congratulate the president and the several committees on the complete success of the congress, on the high value of the various addresses presented to it, and on the forward impulse which it has given to the progress of medicine in the widest sense of that word. They desire at the same time to express in the strongest and warmest terms their sense of and their thanks for the unmeasured kindness and courtesy and the unbounded hospitality with which they have been received on this Centennial occasion, and to add that they will carry back with them a most grateful recollection of that warm right hand of fellowship which has been so warmly extended to them by their brethren of the United States.

This paper was signed by Charles J. Hare, M. D. (Cantab.), F. R. C. P., late Professor of Clinical Medicine in University College, and Physician to University College Hospital; R. Brudenell Carter, F. R. C. S. Eng., Hunterian Professor of Surgery to the Royal College of Surgeons of England; William Adams, F. R. C. S., President of the Medical Society of London.

Professor Gross arose, and as president said there were no resolutions to act upon in this instance, but the remarks were received with grateful consideration.

The resolutions offered above were seconded by various delegates in appropriate speeches, and adopted unanimously.

Pursuant to order, the hour of eleven having arrived, Nathan S. Davis, M. D., Professor of the Principles and Practice of Medicine in Chicago Medical College, proceeded to deliver an address on Medical Education and Medical Institutions, at the conclusion of which the congress adjourned *sine die*.

Thus terminated the most successful, earnest, enjoyable, and above all the most scientific medical gathering which ever met in America. If we may judge

from the expressions of sincere pleasure, and of agreeable disappointment, too, which have been constantly uttered by the foreign delegates, it is probable that they also shared in the universal satisfaction to which this congress has given rise.

A. W. K. NEWTON VERSUS H. O. HOUGHTON ET AL.: JUDGMENT FOR THE DEFENDANTS.

In our issue of September 16, 1875, there appeared an editorial article entitled How Coroners are Appointed, criticising Governor Gaston's action in appointing to the office a certain A. W. K. Newton. Newton saw fit to bring a suit against the publishers of the JOURNAL for the alleged libelous character of the article, laying the damages at twenty thousand dollars. This suit was entered at the January term of the Superior Court, and removed to the Supreme Judicial Court of Suffolk County, in which the defendants appeared and answered, denying that the article was libelous, false, or malicious, and averring that the statements concerning the plaintiff were true, and also that the communication was privileged, as it is the province of the JOURNAL to discuss matters affecting the welfare of the community in relation to the honorable practice of medicine and surgery, and as a coroner is a public officer whose character and the manner of whose appointment are of public interest. By the statute law of Massachusetts either party to a suit may file questions to his adversary calculated to throw light on the issue to be tried. and if the party interrogated unreasonably refuses or neglects to give the required information, the court may order the non-suit or default of the recusant party. After the pleadings were completed the defendants filed interrogatories calculated, if fully answered, to sustain their position as to the character of the plaintiff. These questions the plaintiff saw fit not to answer, and on September 12, 1876, he submitted to the entry of judgment for the defendants. These are the bare facts; our readers will appreciate their importance. The plaintiff, rather than answer under oath certain inquiries into his antecedents, has chosen to abandon his suit, and seems to confess, by the entry of judgment for defendants, that our strictures were merited.

The gross abuses arising from our present system of appointing coroners have become evident to all, and we are glad to see that steps have been taken which in time may do away with the disgrace. The profession may depend upon us to do all in our power to hasten the reform.

MEDICAL NOTES.

— A late number of the *London Lancet* gives an account of two cases of poisoning by chewing the leaves of the Virginia creeper. The juice only appears to have been swallowed. Violent vomiting and purging, with collapse, followed. Large quantities of milk, with some rum, were given, after which the patients revived. It seems surprising, in view of the great prevalence of the vine in this country, that similar cases should not occur.

— An account of several cases of insanity relieved by acute disease is given

by George H. Savage, M. D., in *The Practitioner* for June, 1876. The first case was one of melancholia passing into partial dementia following child-birth. Five weeks after delivery the patient fell into a lethargic state, and had delusions that she was going to be poisoned. She was admitted into the Bethlehem Royal Hospital in a state of partial dementia. She was treated with a liberal diet and tonics. Seven weeks after admission she had most severe pains in lower part of abdomen, with constant vomiting. This continued for three days, drugs and other remedies giving no relief. A retro-uterine hæmatocele was diagnosticated.

From the very onset of the pain and vomiting the patient changed completely in her mental state, and, instead of being dull and lethargic, became bright and pleasant, submitting to all necessary examinations and treatment willingly. She exhibited, too, affectionate interest in her husband and child. She was confined to bed for five weeks, and is now convalescing physically and is well mentally. She never has had any relapse since the development of the hæmatocele.

The second case was one of acute mania, of six months' duration, improving after toothache and the extraction of a tooth. From May to November, 1875, the patient was very noisy, destructive, and untidy. In the middle of November he had a severe toothache, and, after two or three days, the stump was removed. From this time the patient steadily improved, and at the end of December was perfectly well.

A third case of acute mania of four months' duration recovered after inflammation of the jaw. A fourth case was a temporary recovery from melancholia during erysipelas, and in a fifth of melancholia the symptoms were less severe while suffering from bowel obstruction, due to foreign bodies which had been swallowed. This patient was admitted in November, 1875. She was very suicidal. She improved for nearly a month, and then took to swallowing corks, buttons, and all sorts of things. She passed many of these articles, but after some days there were signs of obstruction. She had severe vomiting, and complained of severe abdominal pain, so that for several nights she was sleepless. During this period of pain she was free from delusions; she passed several more foreign bodies, including a mass of horse-hair, and then, on freedom from pain, was again depressed. The writer remarks, "It seems as if severe pain will do good, either by rousing into energy, or occupying the mind and getting it out of its deepening grooves; or the local irritation of a nerve, such as the fifth, so nearly connected with the brain, may alter the cerebral circulation." Galvanism through the head increased the force of the radial pulse on several occasions, thus, he thinks, showing that an influence may be caused in the central circulation by irritation of the extremities.

LETTER FROM PHILADELPHIA.

Messrs. Editors, — The International Medical Congress, anticipated so many months with anxiety as to its success, with actual curiosity, too, as to what would be the character of a congress called together under unusual his-

toric circumstances, as to what might be the degree of interest in the meetings on the part of delegates who must necessarily feel the fascinations of the exposition, as to whether the foreign delegates, coming robed in the texture of the mature fame of older countries, would assimilate without condescension with the more youthful brotherhood of America, — this congress is now medical history.

Many were the prophecies of its indifferent success, if not failure. Under the influence of this half-heartedness some who might have added to the solid character of the congress stood aloof. How baseless this trepidation and these anxieties were has been already shown you by the report which preceded this letter. The congress was a superb success. By those who enjoyed its meetings, its earnestness, thoroughness, harmony, and faithfulness, it will ever be recalled not only with profound pleasure, with a sense of regret that it cannot be re-enjoyed, but in its conscientious fidelity to the duties of the hour, it will be regarded as a model to all future medical gatherings.

When I sat down last June to write you concerning the meeting of the American Medical Association, it was with a sickening sense of its short-comings, its lack of fibre, system, and resolute purpose. A few bright lights cannot create the glow of a sun. A few earnest minds cannot secure the success of a large association. They must be supported by numbers of minds, which, though less brilliant than themselves, may be as earnest and as faithful to duty.

It is with an entirely different sensation that I undertake to tell you something of the International Medical Congress. This is a pleasure which might easily savor of enthusiasm, for this noble congress is the only large medical gathering I have ever attended which approached my ideal of what such an association should be. It gives me satisfaction to find that this feeling is general.

On Monday, September 4th, Prof. S. D. Gross, President of the Centennial Medical Commission, called to order the opening meeting of the congress in the beautiful chapel of the University of Pennsylvania. An invocation by the Right Reverend Bishop Stevens inaugurated the business of the week. Professor Gross then read a calm, eloquent, thoughtful address of welcome, in which he alluded to the difficulties and obstacles which the Centennial Medical Commission had successfully overcome, and bespoke lenity toward any portion of the arrangements which might seem incomplete.

The congress was then declared to be open. The committee on nominations consisted of four foreign and nine American delegates. They were empowered to nominate officers of the congress. They responded by nominating the list of names which was embodied in my general report. The choice of Professor Gross as president evidently gave universal satisfaction. He accepted the office rather as a compliment to Philadelphia than to himself, but we may believe him to be in error here. He assured the congress that this was the greatest honor of his life. As president, he was dignified, courteous, and skillful, and we had reason to be proud of the manner in which he attended to the details of his position.

The addresses which were read in general congress were, without exception

eloquent, well written, and of such interest as generally to hold the entire audience. Comparison of their relative merits would be misplaced. But I may say that the wise and thoughtful address of Dr. Bowditch on Hygiene and Preventive Medicine, which it was voted to distribute largely to governors of States and Territories, and to presidents of all regular medical organizations throughout the country, will probably work the greatest usefulness to the people at large; and that the brilliant, caustic address of Professor Chaillé, of New Orleans, on the inanity of the medico-legal status of America, and the inefficiency of our present general system of medical education, will, it is hoped, redound to the better preparation of medical graduates in the United States. It was frequently remarked during the week that these addresses were objectionable in an international congress, because they were strictly national in character, being for the most part sketches of the history of American medicine. But I think it may be hoped that the foreign delegates found them interesting in a historical and literary sense.

This congress was the outgrowth of the centennium of our nation's history. It would be almost cruel, then, to condemn the national spirit of these addresses, although under circumstances less historical they might with more wisdom have had wider geographical application, and might have been less overshadowed by the wings of our national bird. But, after all, is it not pardonable in Americans who have become venerable in medicine if they speak enthusiastically, boastfully even, of the surprisingly rapid growth of medicine in the United States, as well as of the noble men who have contributed so much to the reputation which the profession in this country have won? This gentle criticism is the sole stricture I have to offer upon the programme of the congress. It must be remembered, however, that foreigners who did not attend the congress had been invited to deliver addresses in general session. Had they *done so*, the strictly domestic character of these lectures would probably have been less evident.

My reference to the programme recalls its great usefulness and practicality. Delegates had only to refer to the work laid down for each day in order to decide in what direction to devote their time. Dr. Bowditch very truly remarked that if the American Medical Association would furnish its members with just such printed programmes of the daily work at their meetings, it would be more systematic and accomplish more.

The printed programme was not the only convenience of the congress. Every morning there were distributed newly-printed lists of delegates who had already registered their names. An immense poster in a prominent place gave the localities and rooms of the sections. Each room was indicated by the proper printed announcement, and even the lunch room, the whereabouts of which hungry men commonly discover without aid, was pointed out by a large paper hand. The noon lunch, by the way, was one of the features of the congress. With other things each delegate received a lunch ticket bearing six coupons. The lunches, furnished by the physicians of Philadelphia, were good and plentiful. Delegates, especially the workers, were much pleased to find that they could obtain tiffin without leaving the building.

One of the lower rooms was appointed with every convenience for correspond-

ence; daily papers were there, and there delegates met for social converse. Another room was devoted to post-office business, and there delegates found their letters. A third room was used for registration purposes.

On the lower floor of the building three of the recitation rooms were used by as many sections. The general congress and the remaining sections had separate rooms on the second floor. Every arrangement was convenient; there was no hitch, rub, or jar, and as a result everybody praised the executive committee in unstinted language.

Another element in this general success was a delightful freedom from noise of every sort. There is no such enemy to the smoothness of section work as the clatter of wheels, talk, noise of footsteps, etc. These were noticeable by their absence. So, then, the mechanical working of the congress was as frictionless as that of a Frodsham watch.

I have wandered from the meetings to minor details by reason of that pleasant anxiety to tell everything first which is invariably observable when one is happily satisfied with all parts of something enjoyable which one is trying to describe. I do not mean to take up the meetings in detail, but merely to give you general impressions.

At the opening session I fancied there was unusual interest because of the presence of distinguished foreigners. Everybody hoped that they would carry away pleasant impressions. This feeling had its influence in keeping things well in hand.

When the names of officers of the congress were announced, hearty applause followed the mention of Mr. Lister, of Edinburgh, as president of the Surgical Section, of Tufnell as vice-president, of Dr. Robert Barnes, of London, and Professor Simpson, of Edinburgh, as president and vice-president of the Obstetrical Section, and of R. Brudenell Carter as president of the Section on Ophthalmology. These distinguished men at once gave immense character and interest to their respective sections. On the second day of the congress Mr. Lister, by invitation of his section, explained his antiseptic system of dressings, including details of his many experiments upon bacteria. He spoke two hours and a half, was then questioned in regard to details, and spoke another hour. It was rather a doubtful thing for him to do, that is, if he were aware of the amount of time he was occupying. But the close and unceasing attention with which he was followed was not only a fine compliment, but may have been the reason of his prolixity. As a speaker Mr. Lister is ready and comparatively fluent. He is a handsome man, but upon the platform loses in good looks. Compactly built, with ruddy cheeks, side whiskers, and the shrewd, canny eye of a Scotchman, upon the platform he is apparently five feet six inches in height. You are surprised when you meet him to find his actual stature five feet ten inches. He has a laughing face, but his firm mouth and bright eye give it character. Modesty is stamped upon his every act and word, but he *does* believe in antiseptic surgery.

Tufnell, of Dublin, was not constant in his attendance, but was very interesting in his remarks on the treatment of aneurisms. In appearance he is a remarkable man: tall, powerfully built, with iron gray hair, flushed face, a clear blue or gray eye, long, prominent nose, high forehead, and a strong chin.

We generally find it easy to see what we think we see. In studying Tufnell's face, wearing one moment a look of almost childlike simplicity, the next an expression of keen humor, we think we trace the characteristics of the true Irishman, but are nonplused when we learn that by birth he is not Irish but English.

William Adams, of London, is a capital teacher. Nothing could be clearer than his paper on Subcutaneous Division of the Neck of the Femur, nor than his subsequent demonstration. He is a charming man, full of *bonhomie*, is not handsome, but has a face one likes to look at. He has a well-shaped, nearly bald head, arched forehead, heavy eyebrows, bright, steady gray eyes, unusually firm mouth and vigorous chin, and wears short, thick side whiskers. He is a good speaker, but uses the rising inflection, so English and so un-American.

These three men, Lister, Adams, and Tufnell, were the strongest of the foreign guests in the Surgical Section. No section worked harder nor with more fervor than this. The discussions on Mr. Adams's paper, that on Antiseptic Surgery, and that on Dr. Van Buren's paper on Aneurisms, were full of interest, were closely followed and thoroughly treated; but the field day was that which gave us the discussion on coxalgia, of which I sent you details in my general report.

Fancy a tilt between Gross and Agnew of Philadelphia, Lister of Edinburgh, Adams of London, Hingston of Montreal, Brodie of Detroit, Moore of Rochester, and Sayre of New York, and other lesser but not less earnest men! These gentlemen used no buttons on their foils. Thrusts were given in earnest. Finally it was found that Professor Gross, who led one side of the debate, would admit that although a child with coxalgia *must* have a strumous constitution, yet his ailment might be lighted up by some slight injury; and that Sayre, who was all on fire in support of his paper and as leader of the opposition, would allow that while in the majority of his cases there was no strumous taint, yet it might be present. Whereupon Mr. Lister, with a quiet smile, said, "Gentlemen, you do not seem to be far apart. I think you may easily harmonize;" and the discussion ended.

The Section on Obstetrics was fully as enthusiastic as the surgical, and was favored, too, by a double row of ladies, who sat statuesquely during every day's meeting. The section heard papers of great value discussed by strong men. Massachusetts was represented in discussion by Kimball, of Lowell.

By the bye, what a comfort it would be if the proper treatment of the pedicle of ovarian tumors could be found.

Dr. Barnes, of London, made an excellent president. In his absence Simpson, of Edinburgh, ably filled the chair. Dr. Barnes and Professor Simpson are as unlike in their physique and manner as two men could well be. Barnes is a little above the average height, and inclined to *embonpoint;* his head is large and bald, his eyes small but bright, his eyebrows heavy; he has fine white teeth, which he shows when he smiles, as he constantly does in conversation; he wears a full brown, peculiarly curly beard and mustache, upon a rather highly-colored face. His manner is hearty, cordial, jovial, and he is a ready talker.

Simpson has a face and head which recall saintly pictures. He is slight in figure, his dark hair is long and wavy and worn behind his ears, and he wears full dark side whiskers. He impresses you as being effeminate, but as you learn to know him and appreciate the strong earnestness of his general expression, you begin to feel his strength. This feeling grows upon you.

The Section on Biology was less fully attended than might have been expected. Dr. Harrison B. Allen's paper secured the largest audience; but Professor Johnston's paper on the Microscopy of the Blood awakened the liveliest sparring. In this connection I may as well put on record a rather sharp thing said by Dr. J. G. Richardson. Richardson remarked that he had understood Johnston to say that on examining a series of unlabeled slides, laid before him by Dr. J. J. Woodward, and which bore specimens of the blood of man, the dog, and the guinea-pig, he found he was liable to pronounce corpuscles of dog's blood to be those of man or the guinea-pig, and *vice versa*. This accorded with Dr. Richardson's own experience, but he would like to ask Professor Johnston whether, in case an Ananias (not Dr. Woodward) brought him a mounted specimen of blood, and, covering the name, told him it was sheep's blood, and he found the corpuscles averaging about one thirty-two hundredth of an inch in diameter, he would not be able to say, "Ananias, you lie!" "Of course," added Dr. Richardson, "by substituting for Ananias and his slide a criminal and his shirt stained by the blood of his victim, and for which he strives to account by asserting that the stain is the blood of a sheep he has just killed, we have in a nutshell the chief principle involved in this controversy."

The Section on Ophthalmology, ably led by the genial Dr. Brudenell Carter, of London, did much able work, and was unusually well attended.

Otology attracted only a few delegates, but the papers read were of excellent quality.

The Sections on Mental Diseases and Sanitary Science were supported by some of the ablest men in the congress; the attendance, though small, was far better than in the same sections at the last meeting of the American Medical Association.

There were prolonged discussions of very excellent papers in the Section on Dermatology and Syphilology. Dr. James C. White, of Boston, was chosen president of this section, and an abler, readier, better man for that chair could not have been found in the congress.

In the Section on Medicine there was much earnest discussion on important questions by men like Bowditch, N. S. Davis of Chicago, J. J. Woodward, U. S. A., Alfred Stillé, of Philadelphia. But the section would not assume the responsibility of opinions expressed in any of the papers read before it.

In short, as you may see, all was earnestness and faithfulness, in whichever direction we may turn. The sections most fully attended were the surgical, obstetrical, and medical, but all, without exception, did good work. There was no shirking. But few delegates were absent at the exposition. The whole affair was a constant source of enjoyment; there were no quarrels; all was harmonious, and speakers, no matter how hard they hit, were invariably courteous. As to the quality of the work done, Dr. Barnes told me he had never in

any London society seen better section work or more general earnestness of interest than in his own department. Mr. Lister and Mr. Adams said the same in regard to their section. Foreign delegates evidently found that the American physician possesses higher attributes than they had anticipated.

There was a noble-looking audience at the morning sessions. The many gray heads and earnest, manly faces, ripe with experience, the deep interest in every word and act, the constancy of these men in their attendance, were deeply impressive. It was a new era in American medicine. May we not hope that the American Medical Association, which, if it do not have Lister and Adams, Barnes and Simpson, Carter, Hueter, and Engelstet, still has among its members men equal to any of these, but who neglect their duty, — may we not hope that this association, incited by the glorious success of the International Medical Congress, will put forth more strength?

As an *entremet* the congress was invited on Wednesday evening to listen to Dr. Woodward's paper on The Medical Staff of the United States Army and its Scientific Work. The lecture attracted an audience who were richly entertained.

The social side of the congress included the reception given by the physicians of Philadelphia on Monday evening, the very elegant and hospitable receptions given by Drs. Wilson and Thompson on Tuesday evening, by Dr. Geo. Strawbridge on Wednesday evening, and by H. C. Lea and J. B. Lippincott on Thursday. Besides, scores of private dinners were given. Hospitality was lavishly bestowed.

The grand subscription dinner on Friday night was as enjoyable and as successful as every other feature of the congress had been. Professor Gross sat at the head of the central table; Mr. Lister sat on his right, supported by General Hawley; on his left sat Governor Hartranft, supported by Adams, of London. After the company of two hundred had discussed an excellent dinner, Professor Gross called for responses to several appropriate toasts. The speakers were Lister, Adams, Governor Hartranft, General Hawley, Professors Stillé, Dalton, Chaillé, Dr. Woodward, and Professor Hjort of Norway. All were eloquent. I wish I might make quotations; suffice it to say that the foreign speakers expressed the warmest satisfaction with the results of the congress, their sense of personal benefit, their surprise at the forwardness of medicine in America, and their gratitude for generous hospitality.

The closing meeting Saturday forenoon was marked by a general expression of fraternal feeling of pleasure in the splendid success of the congress, intermingled with good wishes and cordial farewells.

In boyhood's days, after the wearying, delightful pleasures of a Fourth of July, what one of us but wished the day might be enjoyed all over again? Such, it struck me, was the general feeling at the close of the most memorable medical union in our history.

PHILADELPHIA, *September* 14, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 9, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	506	24.79	29.35
Philadelphia	825,594	320	20.15	22.24
Brooklyn	506,233			24.92
Chicago	420,000	224	27.73	19.75
Boston	352,758	162	23.88	26.20
Providence	101,500	38	19.46	19.02
Worcester	51,087	32	32.57	20.91
Lowell	51,639	26	26.18	20.55
Cambridge	49,670	14	14.66	23.31
Fall River	50,372	20	20.64	23.99
Lawrence	36,240	12	17.02	25.96
Lynn	33,548	22	34.10	19.23
Springfield	32,000	9	14.62	20.93
Salem	26,344	11	21.71	22.92

Normal Death-Rate, 17 per 1000.

The American Association for the Cure of Inebriates will hold its seventh annual meeting at the hall of the College of Physicians, Philadelphia, Pa., September 26, 1876, at ten A. M. Papers on the following subjects are announced: —

Causes of the Increase of Inebriety, by Dr. George M. Beard, of New York city.

Inebriate Asylums and their Management, by Dr. D. G. Dodge, Superintendent of the New York State Inebriate Asylum, Binghamton, N. Y.

Insanity and Inebriety Contrasted, by Dr. Joseph Parrish, Burlington, N. J.

Epilepsy and its Relations to Inebriety, by Dr. E. P. Mann, Superintendent of Ward's Island Emigrant Hospital, New York.

Duration, Mortality, and Prognosis of Inebriety, by Dr. T. D. Crothers, Assistant Physician of the New York State Inebriate Asylum, Binghamton, N. Y.

The address of the president, Dr. T. L. Mason, of Brooklyn, N. Y., will be delivered in the evening.

Other papers and reports of great interest will be read, and the sessions will last three days.

Appointments in the Medical Staff, M. V. M. — Assistant Surgeon Horace E. Marion, Fifth Regiment of Infantry, to be Surgeon (rank major) of Fourth Battalion of Infantry, from September 4, 1876.

The following appointees having successfully passed the Board of Medical Officers organized by General Order No. 24, Adjutant General's Office, current series, have been commissioned: —

Walter Ela, Surgeon (rank major) First Battalion of Cavalry, from August 21, 1876.

Horace Chase, Surgeon (rank major) First Battalion of Infantry, from August 29, 1876.

John H. Kenneally, Surgeon (rank major) Ninth Battalion of Infantry, from September 2, 1876.

Nathan S. Chamberlain, Assistant Surgeon (rank first lieutenant) Sixth Regiment of Infantry, from August 21, 1876.

The Boston Society of Medical Sciences will meet at the house of Dr. Putnam, 63 Marlboro' Street, on Tuesday evening, September 26th, at seven and a half o'clock. Annual meeting.

James J. Putnam, *Secretary.*

Boston Society for Medical Observation. — A regular meeting of the society will be held on Monday evening, October 2d, at eight o'clock. Dr. J. G. Blake will report a case of Intestinal Obstruction of eighteen weeks' duration.

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PHYSICAL EXERCISE FOR THE SICK.[1]

BY JAMES J. PUTNAM, M. D.

It must always have been recognized by every physician having under his care patients afflicted with chronic, confining diseases, especially the so-called functional diseases of the central nervous system, that the treatment would be made immensely more satisfactory if it were only possible to utilize the many influences which the general term "physical exercise" dimly calls to mind, as they are utilized by the relatively and temporarily sick who call themselves well; nevertheless, when obliged to ask ourselves, in practice, exactly how this shall be accomplished, we are generally forced to acknowledge our utter helplessness. We know well the effect of a brisk walk, a row, or an hour in the gymnasium, in relieving the headache and backache of mental fatigue and bodily confinement, dyspepsia, constipation, and kindred ills in ourselves, and we listen with a sense of discomfiture and annoyance to the statements of our feebler patients that the nearest approach which they can make to these forms of exercise, which usually consists in a few turns round their chambers or the public square, is impotent to relieve similar disorders in them, if indeed it does not leave them with increased weariness and pain.

On the other hand, it must be known to most of my hearers that in a number of the cities of Europe and a very few of America institutions exist, by no means always conducted by money-seeking charlatans, where such cases as those to which I refer can, through appropriate and systematized physical exercise, secure relief which is often unattainable by other means.

It would be of great value to our community if reliable institutions of this kind could be established here, and as one step towards that end it is important for physicians to familiarize themselves with the methods of treatment adopted in these institutions and the principles on which they are based, especially as it is occasionally possible to apply the same principles to advantage in private practice.

The main source of the work which has been done in this direction

[1] Read before the Massachusetts Medical Society, June 13, 1876.

in the last half-century was in the efforts of the intelligent and zealous, though no doubt extravagant, student and gymnast, the Swede Ling, and the great Central Gymnastic Institute at Stockholm, founded at his instigation, which still sends out every year numbers of skilled gymnasts for the training of the sick and the well, has been the model for many of the institutions of which I have spoken. The treatment adopted in them has, as a whole, received the name of the Swedish movement cure. It embraces much of what is known as *massage*, although in its details and its elaboration the use of manipulation of the tissues, handed down to us from the ancients, has been elevated into a system of treatment by itself.

Visitors to Philadelphia can see in Machinery Hall a number of ingenious pieces of apparatus, designed by their intelligent exhibitor, the superintendent of a gymnastic institute at Stockholm, to carry out these methods of treatment, the hand of the *masseur* and the gymnast being superseded by steam-moved machines and adjustable weights. In the Main Building are also to be seen models of equally ingenious and simpler apparatus for accomplishing analogous results, contrived by Dr. C. Fayette Taylor, of New York, who is well known as an energetic worker in this direction. Finally, while speaking of apparatus for medical exercise I would refer to the "lifting-cure" machines, though their range of usefulness must of necessity be more limited than that of the others. For the best exposition of the principles which underlie these systems of exercise I would refer, with acknowledgments, to various papers by Dr. C. F. Taylor, without, at the same time, indorsing all the statements therein contained.

Judicious physical exercise may legitimately aim at securing the following results: (1.) The diversion of the mind, to the end of securing the influence of the will in promoting the proper performance of the processes necessary to health, and of turning aside the thoughts from directions in which they may be running to the detriment of the health. (2.) The establishment of a more perfect control of the will over the muscles. (3.) The stimulation of the nervous centres which control the vegetative processes of the body, and perhaps the nutrition of the tissues themselves in some degree. (4.) The furtherance of the circulation of the lymph and of the blood, by alternate dilatation and compression of the canals in which they are conveyed, and by acting through the nervous system upon the heart. (5.) Probably the removal of certain distressing conditions due to local congestions, especially in some cases of heart disease with congestion of the lungs, by increasing the activity of the circulation elsewhere, particularly through the muscles. It is claimed that patients suffering from the dyspnœa attendant upon heart disease often obtain great relief from some of the passive exercises to be described later, and form a considerable proportion of the most

faithful adherents to the treatment. The pulse is said to become fuller and stronger after the applications. The reason for this may be complex, as the same is said, I do not know if on good authority, to attend the use of the lifting cure. (6.) Possibly the stimulation of the nutrition of various tissues by direct mechanical excitation.

The means which are at our disposal for the accomplishment of these ends are of the following nature : —

I. For the mechanical excitation of the skin and deeper tissues, with their nerves and vessels, the parts may be strongly kneaded, stretched, etc., with the fingers or edge of the hand, according to the various methods of regular *massage;* every one who has experienced a manipulation of this sort must have been struck with the profound, yet not painful, impression which can be made by it upon the nervous system. The skin may also be easily reddened in this way, and when the immense capacity and variability in size of the vascular system of the muscles is borne in mind, it is easy to conceive that if these vessels are affected in like manner a considerable amount of blood will be withdrawn from the circulation at large. By the machinery on exhibition at Philadelphia similar effects are produced in several ways, such as the following: one or both legs are laid across a cushioned strip or oblong block of wood about three inches wide, which is then made to vibrate up and down with great rapidity. Thes ensation is like that felt when one is struck rapidly by the edge of the open hand of the *masseur*, but it is deeper and more intense, and is decidedly pleasurable.

Dr. T. Zander, the exhibitor, says that a feeling of coldness of the leg is often spoken of during the operation, but that it soon gives place to a sense of increased warmth. In a manner similar to this all parts of the body may be treated: the back, the chest, the throat, and the joints. The character of the application varies between vibration and percussion, and is administered either with broad padded surfaces of wooden hammers and knobs, or with small rubber-covered rods. The sensation felt throughout the operation is peculiarly engrossing and rather pleasant; that left behind by it, in a healthy person, may perhaps be described as resembling the feeling left by a moment's vigorous exertion, a sort of consciousness of the existence of muscles, ligaments, and joints, unaccompanied by any sense of fatigue.

It is said that when the lower part of the back is percussed in this manner, the patient leaning against a pad which moves rapidly from side to side, a desire to empty the bladder is felt which sometimes requires an effort to control.

There is reason to think that besides affecting strongly the sensitive, and by reflex action the motor nerves, and by quickening the local circulation, this mechanical agitation of the various tissues may increase the nutritive processes in them, perhaps directly, and perhaps also by increasing the flow of blood and of lymph.

It is, in fact, a matter of demonstration that simple passive motion of a limb, as, for instance, that of an animal which has been recently killed, will cause lymph, or, in place of it, colored fluids injected beneath the fascia, to be sucked up into the lymph spaces of the tendons and fasciæ, pumped into the lymph channels, and finally into the lymph ducts of the abdomen. In this connection the action of *massage* in improving the local nutrition of diseased joints, and in promoting absorption, is to be borne in mind.

II. For the purpose of establishing a more perfect relationship of control and obedience between the muscular system and the nervous centres it is often necessary to begin at the very bottom round of the ladder, and to let the movement which it is desired that the patient should carry out, such as breathing deeply, walking, or using the trunk and arms, be performed for him at first by an external power, while his will remains passive, or works with a minimal effort, parallel, as it were, with the movement which is going on. To this end Dr. Taylor has invented ingenious machines which, while the patient sits at rest, carry the legs through the movements of walking, or extend the arms strongly over the head, enforcing a deep inspiration, and the like. Having thus learned how these movements feel, often a forgotten knowledge, the patient may next try expending a slight amount of voluntary power in their production, and may gradually increase it, according to his ability, never being allowed to discover his weakness through failure, and always being kept up to the mark. Where the weight of even an extremity, or of the body, is too great for the patient's strength, a certain amount is taken off by the use of adjustable weights, and in this way he is enabled to perform every possible movement: bending of the body, or of the legs stretched out at length, extension of the arm at the shoulder, etc.

III. For the purpose of exciting the action of the intestines, in the relief of constipation, they may be subjected to various mechanical stimulations. By one method (Taylor's) the relaxed abdomen is pushed to and fro by wooden buffers, and kneaded as by the hand; by another (Zander's) the patient is placed upon a large saddle which is made to turn with greater or less rapidity in such a way that its inclination to the horizon is constantly changing. The patient's part is to maintain his seat erect, — no easy matter when the inclination and rapidity of motion are considerable, — and he finds, at the end, that an amount of contraction of the abdominal muscles has been instinctively put forth that he would not perhaps have believed himself capable of exerting, and that his abdominal viscera have received a fair share of churning. It is claimed that a persistent use of such means as these will after a time give great and even permanent relief.

It is unfortunately true that no satisfactory and sufficient scientific

explanations can be given of the exact physiological action of most of the methods of treatment described, but here, as in most other branches of therapeutics, science follows art with limping pace.

As for the evidence from experience, even if we refuse to admit the testimony of interested persons, we have collateral arguments of some value. The use of *massage* is highly esteemed by excellent physicians as a general tonic and for its influence upon local nutrition. So good an observer as Billroth thinks that he has seen tumors dissipated by it; it can hardly appear more remarkable that laryngeal catarrh should, as is claimed, be favorably affected by the firm and rapid vibration to which, by one of these machines, the throat is subjected. That the peristaltic action of the bowels should be increased by mechanical stimulation cannot surprise any one who has seen the same phenomenon in an animal recently killed; and the very fact that this result does not occur immediately as an effect of such treatment, but is the consequence of repeated treatments, might be taken as, to a certain extent, a warrant of permanency, since it implies, or may imply, a nutritive change in the corresponding nervous centres, which required time to induce, and which, therefore, would be the less likely to be ephemeral.

What might be called the sedative and derivative influences of exercise were spoken of in the early part of the paper as holding a recognized place in the household therapeutics of persons in comparative health, and still more striking results might be looked for among a certain class of the sick, those, namely, whose diseases consist essentially in a loss of the proper balance between the different departments of the nervous system. Such cases are well known to be exceedingly obstinate, and disheartening to treat as private patients, and they present very unpleasant symptoms, which, however, often disappear rapidly if the appropriate treatment is hit upon. For cases of this kind I believe that there is nothing which can compare with judicious and graduated physical exercise, and its influence may properly be classed among the "inhibitory" influences of the physiologist. In a state of health the various divisions of the nervous system stand in relations of mutual dependence, and what goes on in any one of them is not a matter of indifference to the rest. Thus, two impressions made simultaneously upon different parts of the nervous system may tend to strengthen each other's action or to partially annul it, according to laws which physiologists are now beginning to discover. In cases of so-called hysteria this balance is disturbed, and a disordered and excessive action of certain centres is produced, analogous to that seen in the spinal cord of a decapitated frog. Well-chosen physical exercise tends to counteract this condition, and to restore the needed balance, in the same way that strong mental influences, or counter-irritation of the skin, tend to do so, namely, by diverting the consciousness, as well as some of the

involuntary nervous processes, of the patient into new channels; but exercise is better adapted for this purpose than either of the other two agencies, because its action can be more certainly counted upon and more readily graduated, and because its effects are more likely to be permanent, the new directions into which the force of the patient is directed being such as tend to increase his health and efficiency.

In conclusion I will say a few words as to the special application which can be made by the general practitioner of the principles to which I have alluded, though it would be impossible to give a series of practical directions in so brief a space. For passive movements and manipulations we must usually content ourselves with those given by the professional manipulators, which, useful as they often are, can hardly make the same profound nervous impression as that which comes from the use of the evenly working, steam-driven machines of which I have spoken.

A degree of stretching which is often very grateful to a feeble person may be given by one or two intelligent assistants, grasping respectively the hands and the feet of the patient. Another method, somewhat more active, of accomplishing a similar end, suggested, as are indeed all of those which I shall mention, by Dr. Taylor,[1] is to let the patient, standing with feet together, grasp a bar immediately above his head, and while he keeps the legs and arms straight, allowing free motions only to the joints of the ankles, hips, back, and shoulders, to let an assistant take him by the middle and swing the body rhythmically and steadily and not too slowly around, as if it were a bow supported above and below at its ends.

Of the semi-active exercises in which the patient uses voluntary effort to overcome a graduated resistance, the physician can, under strict observance of correct principles, readily invent a sufficient variety, to be administered by the hand of an assistant, but, if the patient is not excessively feeble, and especially if, as in many so-called hysterical cases, it is desired to exercise certain groups of muscles, notably the extensors of the limbs, a few pieces of simple apparatus such as are described in Dr. Taylor's book will be found of service.

In the treatment of the common cases of bed-ridden, so-called hysterial patients, an important moral point is often gained and a useful faculty imparted, if they can be got safely on to their feet and be made to walk, though at first but half a dozen steps. To meet this need Dr. Taylor has used an apparatus, to the efficiency of which I can bear witness, which consists simply of a pair of strong jointless leg-irons, attached to a pair of boots below, and above to a band which is firmly strapped around the thigh, while the knee is prevented from bending by a leather knee-cap. This apparatus having been adjusted as the patient lies in

[1] Principles and Practice of the Movement Cure.

bed, the physician buckles a long webbing strap around his own and the patient's waist, or rather hips, and placing his hands underneath her arms hoists her, with the aid of an assistant who lifts the legs, upon her feet. It is evident, that secured as I have described, she cannot fall, the knee and ankle being held stiff by the apparatus and the hips by the strap, which the physician controls with his own body. The sense of security which is imparted by this contrivance is very great, and it is often no long time before first one knee-cap can be left off, and then the other, until at last the patient walks alone and feels herself in reality made anew.

For such a purpose as this, when it serves to bring encouragement to the patient, or when it is undertaken as a diversion, walking is of course often of the greatest value, but, regarded as physical exercise where it is desirable to husband the strength carefully, and at the same time to increase it by calling for nicely graduated exertion, it does not deserve the esteem which it has. Walking calls upon certain groups of muscles for severe and prolonged efforts, while it leaves others comparatively at rest, and, moreover, since a feeble patient is usually obliged to move slowly and stiffly on account of the weight of the mass to be moved, the beneficial effects of rapid movement upon the circulation of the fluids in the tissues, and, through the sensitive nerves, upon the central nervous system, are sacrificed. I have not spoken, in this paper, of the effects of the so-called lifting cure, partly because I have had no convenient opportunity to inquire into them, and partly because I think that this treatment involves no principle which the other forms of exercise do not also involve, although as a single form of condensed exercise it may be often very useful. It is claimed, and no doubt with reason, that the increasing weight searches out all the muscles whose associated action could help to raise it, until a large proportion of the voluntary muscles of the body are called at once into play. It ought to be said that this sort of exercise is believed by some persons to be not unattended with danger of strains.

The increase in the ability to lift, which often goes on quite rapidly, up to a certain point, is of course due, not to growth of muscular tissue, but to the education of the nervous system. Permanently good results in difficult cases, even though exercise may be eminently indicated, is often obtained only after a trial of several different methods, any one of which, alone, would have failed.

RECENT PROGRESS IN THERAPEUTICS.[1]

BY ROBERT AMORY, M. D.

Amyl-Nitrite; its Physiological Action. — M. Jolyet,[2] from experiments with inhalation of amyl-nitrite, concludes that the blood under these circumstances will absorb less oxygen than in the normal condition, and, as a consequence, that less carbonic acid gas will be formed; also that the diminution in the absorption of oxygen is due to a transformation of hæmoglobine, but that this transformation is not permanent, since in twenty-four or forty-eight hours afterwards the hæmoglobine recovers its property of absorbing oxygen.

Fuchsine not a Poison; its Therapeutical Use in Albuminuria; its Use in Coloring Wines. — Messieurs Bergeron and Clouet[2] presented to the Société Industrielle de Rouen a communication stating the absolute harmlessness of pure fuchsine or hydrochlorate of rose-aniline (when freed from arsenical impurity), and they also reported the complete disappearance of a persistent albuminuria after the ingestion of this purified coloring matter. "During two months the urine, though oftentimes tested, failed to give any evidence of albumen." Dr. Feltz also reported a hospital case of an œdematous patient who had persistent albuminuria, in which fuchsine was employed in the dose of ten centigrammes (about a grain and a half). No particular discomfort or untoward symptom, either variation in pulse, temperature, or respiratory movement, followed its use. From this single case he deduced the following conclusions: —

(1.) Fuchsine in the quantity ordinarily employed to color alimentary substances is perfectly harmless, provided it be pure.

(2.) Fuchsine has a special effect on the character of urine secreted. It increases the amount of phosphates and causes the disappearance of albumen.

In another case of albuminuria, in which fifteen centigrammes (about two and a quarter grains) of fuchsine were employed in a divided dose, the albuminuria disappeared and was not detected four days after the second dose.

At a subsequent meeting of the Académie des Sciences, Messieurs Feltz and Ritter made a further contribution to the toxicology of fuchsine, which is used in large quantities at Nancy for the purpose of enriching the color of wines or for disguising the addition of water. The above-named physicians experimented on a robust man, fifty years old, to whom they gave on an empty stomach two hundred cubic centimetres (about three pints) of wine which contained fifty centigrammes (about seven grains) of fuchsine. Fifteen minutes after drinking the

[1] Concluded from page 348.

[2] Société de Biologie, Séance de 17 Juin; Gazette Hebdomadaire, June 23, 1876.

wine his ears became red, his lips itched, and his gums were swollen. These symptoms and an irritation of the mucous surfaces disappeared in three days. He then drank, during twelve consecutive days, about a litre of wine colored with fuchsine. The same symptoms were each time reproduced, and at the end of the twelfth day colicky pains and diarrhœa supervened; the urine which he voided assumed a rose-color, and finally became albuminous. Daily doses of sixty centigrammes of fuchsine were given to dogs, and were followed by rose-colored urine, emaciation of body, albuminuria (the urine also containing granular and degenerated cylinder epithelium), diarrhœa, and itching of mouth. Intra-venous injections of fuchsine in doses varying from thirty-five to sixty centigrammes, in some cases repeated daily for two or three days, were followed by congestion of the mucous surfaces. Two of the dogs died on the tenth and twelfth days, and another was killed on the twenty-first day. In all three the tissues were stained and the kidneys granular. All the dogs experimented upon had albuminuria.

Chloroform; Effects on Animal Temperature. — Dr. Simonin [1] records the effect of chloroform inhalation on the temperature of sixty individuals. In two thirds of the cases observed, he noted an elevation of temperature (one tenth of a degree to four tenths of a degree Centigrade) during the period of excitement. In ten per cent. of the cases he noted during the period of relaxation an elevation of one tenth of a degree centigrade, and in the other fifty-four cases a fall of temperature (two tenths of a degree to eight tenths of a degree).

In all the cases he observed during the period of collapse a fall of temperature (nine tenths of a degree to one degree and four tenths Centigrade).

A New Adhesive Plaster.[2] — A mixture of twenty parts of mucilage and one part of glycerine constitutes an excellent, shining, and supple plaster, far cheaper than resin and diachylon, and lasting more than a year without deterioration. Three or four layers of the mixture must be spread over each other on the linen or other stuff, allowing sufficient time for the successive layers to dry.

Absence of Mercury in the Milk of Nursing Women.— O. Kahler,[3] subjected two women to mercurial inunction, and even when the women were mercurialized he was unable to detect the slightest trace of mercury in their urine. Referring to the statements that mercury had been recovered from the milk of nursing animals which had been subjected to the action of mercury, the author explains the positive statements of experimenters by the suggestion that the erroneous conclusion was cause by the fact that in the method of analysis (electrolysis) materials were

[1] Revue Médicale de l'Est, 8, 1876, pages 1 and 3.
[2] Medical and Surgical Reporter, July 29, 1876.
[3] Präger Vierteljahrsschrift, cxxvii., s. 39.

used which contained mercury. He does not dispute the results of clinical experience which show so much improvement both in syphilitic mothers and in their children under mercurial treatment, but this is ascribed to the improved general health of the nursing parent.

Treatment of Albuminuria: — Dr. Hall,[1] after the clinical use of various forms of medication in albuminuria, sums up his experience and theory for treatment in the following words: "Dr. Southey attributes the success of the employment of the tartrate of potash in Bright's disease to the abundant diuresis of alkaline urine. . . . . I am speculative enough myself to imagine that an alkaline fluid, passing through the urine tubes, has some similar action to that of weak soda or potash solutions upon sections of dead kidney-tissue under the microscope. I mean that fat granules are saponified, cells are rendered more translucent, the interstitial tissues become looser, and the circulation is thus facilitated. . . . . As a general rule, far too little attention is paid by the medical attendant to the diet of the patient; that is to say, the directions given are vague in the extreme; but in acute albuminuria, as in typhoid fever, any indiscretion in the food may be visited with the most severe punishment; an attack of convulsions may be caused by excess, just as I have seen perforation result from taking solid food too early in typhoid fever. I would sum up the treatment of acute Bright's disease in the following words: —

"(1.) Milk and water with arrowroot; no solid food.

"(2.) Mild diuretics, such as the citrate or bitartrate of potash, with a free supply of water.

"(3.) The skin to be kept just moist.

"(4.) A daily evacuation of the bowels."

On Official Dosage, with some Remarks on Homœopathic Tinctures. — Dr. Farquharson,[2] lecturer on materia medica at St. Mary's Hospital Medical School, read a paper before the Medical Society of London, in which occur some rather startling statements upon the official doses and their disregard by practitioners of medicine. First, in regard to the dose of tincture of digitalis requisite in a case of delirium tremens, he refers to the well-known case of a physician in Ramsgate, who prescribed half an ounce of the above tincture in a case of severe delirium tremens, and to the fact that the druggist refused to dispense the medicine with the directions. The author then states that oftentimes very large and apparently dangerous doses are required to alleviate serious symptoms, and mentions his own experience of ordering ounce doses of succus conii for acute chorea in a girl ten years old; in this case the dispensary prescriber only gave drachm doses, fearing that an error had been made. "Here no harm was done, for the patient, afterwards get-

[1] Practitioner, August, 1876.
[2] Practitioner, May, 1876.

ting her proper dose, an ounce, was rapidly cured." In another instance Dr. Farquharson says that he prescribed twenty minims of tincture of belladonna for a child three years old, to the consternation of the apothecary. On these facts he bases his paper.

The authorized dose of succus conii [1] is represented in the British Pharmacopœia as varying from ten minims to a drachm. Dr. Farquharson says that John Harley's experiments teach us to give from one to six ounces.[2] He then comments on the advantage of using very large doses of belladonna in incontinence of urine, and states that he has given from a drachm to two drachms and a half, twenty minims being the official maximum dose.

Next, Dr. Farquharson considers the practice of giving small doses of quinine, remarking that many physicians now give twenty or thirty grains.

On the other hand, of aconite tincture (Br. P.) the official dose of five drops is too large for a minimum dose. The tincture of the United States Pharmacopœia is about three times as strong as that of the British.

Then again, bromide of potassium is often given in doses of thirty grains or more, and twenty, thirty, forty, and even sixty grains of iodide of potassium are not only harmless, but are often required to achieve brilliant success.

After the discussion of these doses and those of some other drugs, Dr. Farquharson takes up the homœopathic tinctures. He purchased a specimen of the strong or mother tincture of aconite, at a homœopathic pharmacy, and injected hypodermically five minims into a rabbit, and, five minutes later, fifteen minims, producing the death of the animal in "exactly five minutes after the injection was performed." Ten minims proved fatal to a smaller animal in twenty-five minutes.

Dr. Farquharson also found that the homœopathic mother tincture of belladonna was much stronger than that of the British Pharmacopœia. The other vegetable mother tinctures, he says, are as a rule made on the uniform standard of one part of the juice of the plant to one of spirit.

Dr. Farquharson then caused an analysis to be made of two homœopathic solutions, by the analytical chemist of Messrs. Savory and Moore.

(1.) "Arsenicum Alb., poison, dose for an adult, one to five drops," was estimated by volumetric and gravimetric methods with the following results: —

	Volumetric.	Gravimetric.
Arsenious acid	.994 gr.	.893 gr.
Water	100.000 grs.	100.000 grs.

[1] Not mentioned in the United States Pharmacopœia.

[2] In America we prefer to use other stronger preparations of conium because their effects are more precise, and the action of succus conii seems almost inert.

Reduced to fluid measures, there was one grain of arsenious acid in one hundred and two minims of water.

(2.) "Mercurius; Cor. Poison. Dose for an adult, one to five drops." Colorimetric and volumetric analysis gave the following results: —

Mercuric chloride	.75 gr.
Water	100.00 grs.

or, there was about one grain in two fluid drachms.

As these were the only analyses made, the author could only conjecture what strength other homœopathic remedies might have. The dangers to be apprehended from this state of things Dr. Farquharson pictures in an unpleasant light, and recalls to our memory Dr. George Johnson's interesting cases of homœopathic poisoning with monobromide of camphor.

Quinine. — Dr. Binz[1] contends that quinine does not diminish reflex excitability in the nervous system, and that its action as a febrifuge must be explained by its power of decreasing oxidation, and by disintegration of the elements of the body, and he brings, among other proofs in support of this theory, the fact that the excretion of urea is diminished. As this drug remains in the circulation for a long time, its antiseptic properties, which are not injurious to the tissues, are constantly exerted; moreover, as it does not form a compound and thus become inert, its action is superior to other antiseptic medicinal agents.

Binz adduces experimental evidence to show that quinine acts immediately upon protoplasm without reflex action through the nervous system. Following out the analogy of its uncertain action upon many septic ferments outside of the body, Binz would in the same manner explain its uncertain action upon different forms of fever; for instance, it is an efficient remedy against ague, and has no curative effect upon relapsing fever; it acts as an antipyretic agent in typhus abdominalis, but not in typhus exanthematicus.

Dr. Binz recommends large doses of quinine, to be given in solution with some acid, and during the remissions of the fever.

ANNUAL MEETING OF THE AMERICAN GYNÆCOLOGICAL SOCIETY.

The first annual meeting of the American Gynæcological Society was held in New York, at the Academy of Medicine, September 13th, 14th, and 15th. The great interest felt in the proceedings of the society by the members of the profession resident in New York was shown by the full attendance at all the sessions. From the beginning to the end the Academy of Medicine was crowded with an attentive audience. The society was called to order at ten

[1] Practitioner, June, 1876.

o'clock on the morning of Wednesday, September 13th, by the president, Dr. Fordyce Barker. The roll-call showed the following Fellows to be present: Drs. Fordyce Barker, E. R. Peaslee, T. A. Emmett, T. G. Thomas, I. E. Taylor, E. Noeggerath, W. T. Lusk, and P. F. Mundé, of New York; G. H. Lyman, W. L. Richardson, G. H. Bixby, and J. R. Chadwick, of Boston; W. L. Atlee, W. Goodell, A. H. Smith, and T. M. Drysdale, of Philadelphia; J. Byrne and A. J. C. Skene, of Brooklyn; H. P. C. Wilson and W. T. Howard, of Baltimore; W. H. Byford, of Chicago; J. P. White, of Buffalo; T. Parvin, of Indianapolis; J. D. Trask, of Astoria; E. W. Jenks, of Detroit; H. F. Campbell, of Augusta, Ga.; and G. J. Engelmann, of St. Louis.

Dr. Thomas extended a most cordial welcome to the society, and especially expressed the pleasure which he felt in offering the hospitalities of the New York members to Dr. Robert Barnes, of London, who had come to this country to be present at the meeting of the society. The following gentlemen were invited to take part in the proceedings: Drs. Trenholme of Montreal, Hodder of Toronto, Tagliafero of Georgia, Roseburgh of Hamilton, Canada, Reamy of Cincinnati, Fox of Madison, Wis., Sassdorf of Georgia, Shepard of Grand Rapids, Eveleth of Maine, Seely of Chicago, Hodgen of St. Louis, Eve of Georgia, Bates and Russell of Massachusetts, Ward of Alabama, Brown of Baltimore, and Gænstein of Texas.

Dr. Emmett then read a paper on Incision of the Cervix Uteri. A careful analysis was given of three hundred and forty cases of the various forms of flexion which occur in the cervix uteri. Of these, fifty-three per cent. were of the cervix and forty-seven per cent. of the body. Dr. Emmett considered that a flexion of the cervix was proof that impregnation had not taken place. In cases of anteflexion of the cervix pain at the beginning of the menstrual flow is the rule, and this pain rarely lasts after the flow is fairly established. Where there is anteflexion of the body there is rarely any pain at the beginning of the catamenial period. The author advised against any incision unless the flexion was in the cervix and below the vaginal portion. Two out of three women with flexion of the cervix have become pregnant after the operation.

In the discussion which followed the reading of the paper, Dr. Peaslee agreed entirely with the writer, as did also Dr. White. Dr. Barnes said that he had never seen a case of stenosis of the internal os in which he could not pass, with care, a uterine sound.

Before adjourning for the noon recess, Drs. Jenks, Johnson, and Skene were appointed a committee to nominate officers, and Drs. Lyman, Noeggerath, and Engelmann on the auditing committee.

By invitation the society lunched at the house of Dr. Peaslee.

At three o'clock Dr. Skene read a paper on Cicatrices of the Cervix Uteri. The discussion which followed was participated in by Drs. Trenholme and Emmett.

Dr. Jenks then read a paper on Viburnum Prunifolium, with special reference to its uses in the treatment of the diseases of women. The writer dwelt on its great value in the treatment of the various forms of dysmenorrhœa, especially in that known as spasmodic. The dose he used was from half a drachm to a drachm of the fluid extract, given every two or three hours during the

menstrual period. Drs. Bates, White, Eve, Byford, Mundé, and Engelmann took part in the discussion which followed.

The secretary then read a paper contributed by Dr. H. R. Storer on the Uterine Ebb and Flow as a Factor in Uterine Disease. The object of the paper was to show the necessity of selecting the post-catamenial period as the time for performing uterine operations. Drs. Campbell, Trenholme, and Engelmann briefly discussed the paper, after which Dr. Parvin read the account of a curious case of abnormal menstruation.

In the evening Dr. Fordyce Barker gave a dinner party, and subsequently a reception to the Fellows of the society, at his house, to which also a large number of the New York medical profession were invited.

At ten o'clock on Thursday morning the president, Dr. Barker, delivered the annual address. After referring briefly to the origin of the society and to the discretion and energy of its projectors, he gave a brief sketch of the advancement made recently in this branch of medicine, and showed how large the field still was for future work. Dr. Robert Barnes then read a most admirable paper on the various physiological and pathological changes which may occur during the pregnant state. A special vote of thanks to Dr. Barnes was passed, and the paper was briefly discussed by Drs. Peaslee, Lusk, Richardson, and Noeggerath.

Dr. Byford then read a paper on the Spontaneous and Artificial Disintegration of Fibrous Tumors of the Uterus. Several cases were given by Dr. Byford in which the administration of ergot, for a longer or shorter time, had been followed by the gradual disintegration and expulsion of large uterine tumors. Owing to the late hour the discussion of the paper was postponed until Friday morning.

The Fellows of the society lunched by invitation at the house of Dr. Thomas.

The first paper of the afternoon was read by Dr. Thomas, who gave an account of a case of abdominal pregnancy treated by abdominal section. In the discussion which followed, Dr. Barnes did not agree with the reader that it was necessarily better to leave an opening in the abdominal wound for the subsequent escape, if need be, of the placenta, as he thought that by allowing the wound to close there was less liability to decomposition. He did not believe that it was possible to tell whether the fluid drawn from an abdominal tumor was ovarian from the mere presence of the so-called ovarian corpuscle. To this Dr. Drysdale took exception, and stated that he believed there was a corpuscle which was pathognomic of ovarian fluid. The paper was still further discussed by Drs. Engelmann, Chadwick, and Byford.

A paper on Pneumatic Self-Replacement in Dislocation of the Gravid and Non-Gravid Uterus was read by Dr. Campbell, and discussed by Drs. Emmett. Smith, Chadwick, Peaslee, and Wilson.

On Friday morning the business meeting was held at nine o'clock. The records of the inaugural meeting, and the reports of the treasurer and of the auditing committee were read. Votes of thanks were passed to the New York Academy of Medicine for the use of the hall, and to the New York Fellows of the society for their kind and hospitable reception of the society. The time

for holding the next meeting was fixed for the last week in May, and Boston was selected as the place of meeting. The present list of officers was unanimously reëlected.

The following honorary members were elected: Dr. Barnes and Mr. Wells of London, Drs. McClintock of Dublin, Keith of Edinburgh, Simon of Heidelberg, Schroeder of Berlin, Koeberle of France, Eve of Augusta, Ga., and Wright of Cincinnati.

At the public meeting which followed, the discussion of Dr. Byford's paper was taken up and participated in by Drs. Atlee, Goodell, Drysdale, and Emmett.

The next paper, by Dr. Noeggerath, was upon Latent Gonorrhœa, especially with Regard to its Influence on the Fertility of Women. The paper was merely a still further promulgation of the views set forth in 1872 by the writer, who asserts the existence in women of a subacute form of gonorrhœa which is almost incurable, and which is the cause of a large proportion of the cases of sterility which a doctor is called upon to treat. A man has gonorrhœa and is supposed to be cured of it, but according to Dr. Noeggerath he still carries about with him the traces of the poison, which communicates to the female this so-called latent gonorrhœa. The views of the reader were adversely criticised by Trenholme, Engelmann, and Chadwick.

The secretary read a paper contributed by Dr. Alfred Wiltshire, of England, on Death from Urinæmia in certain Cases of Malignant Disease of the Uterus. A discussion by Drs. Parvin, Campbell, Skene, and Barker followed.

Dr. Engelmann then read an account of two cases of Menstrual Hystero-Neurosis of the Stomach.

An adjournment to lunch at the house of Dr. Emmett followed, and the afternoon session was opened by the report of a case of Extirpation of a Bipartite Uterus and both Ovaries for the Cure of Epilepsy, by Dr. Peaslee, who showed the specimen alluded to. A discussion followed, in which Drs. Trenholme, Thomas, Noeggerath, Emmett, and Atlee took part.

The last paper which was read was by Dr. Goodell on The Genital Lesions of Childbirth. The writer favored the immediate closure of all perineal rents. Drs. Emmett, Campbell, Wilson, Skene, Jenks, Howard, Roseburgh, and Atlee discussed the subject, most of them sustaining the views expressed in the paper. Drs. Jenks and Barker, however, believed that immediate closure was of little use in cases where the perinæum had been previously subjected to long-continued pressure. Dr. Howard did not believe that in cases of delay at the perinæum there was direct pressure on that part itself, but that the head really pressed on the inferior pelvic strait.

A letter was read from Dr. Sims, regretting his unavoidable absence, and a vote of sympathy was passed by the society for Drs. Buckingham and Battey, both of whom were prevented by sickness from being present. The hour having arrived for a final adjournment, the few papers yet remaining on the programme were read by title, as follows: Battey's Operation for Extirpation of the Ovaries, by Dr. R. Battey; Hydrate of Chloral in Obstetric Practice, by Dr. W. L. Richardson; A Case of Labor complicated with Four large Uterine Fibroids and Placenta Prævia, by Dr. J. R. Chadwick; Cases of Cystic

Tumors of the Pelvis, by Dr. G. H. Bixby; Masturbation in Women, with a Report of Seventeen Cases treated with Bromide of Potassium, by Dr. J. R. Chadwick; What is the History of Calculi formed in the Bladder after Operations for Vesico-Vaginal Fistulæ? by Dr. H. F. Campbell; A Case of the Passage of Fœtal Bones from the Bladder, by Dr. James P. White; and papers sent by Dr. J. Matthews Duncan, of Edinburgh, and Mr. Lawson Tait, of Birmingham. The papers will all appear in the volume of Transactions which is soon to be published.

The president delivered a short farewell address, and at five o'clock the society adjourned until next May.

The meetings were wonderfully successful, and the papers were all of unusual merit. The discussions were to the point, and full of instructive suggestions. A letter was received from Dr. Dalton, asking for specimens of ovaries and uteri, with a view of pursuing still further his investigations as to the *corpora lutea* of pregnancy and menstruation.

The Fellows of the society were, during the sessions, most hospitably entertained by the New York members. It had been proposed at first to have a dinner at Delmonico's, but on second thought a more social plan was adopted, and private dinners were given by Drs. Barker, Taylor, and Lusk. The Transactions of the society are to be at once published, giving at length the papers and the discussions. Arrangements have also been made by the secretary for publishing in this volume a list of all the obstetric and gynæcological titles annually prepared for the catalogue of the surgeon-general's office at Washington. The first meeting of the society seems to have been a perfect success, and we can but hope that a similar result will attend the next meeting, in Boston.

THE FARMER'S VETERINARY ADVISER.[1]

THE name and reputation of Professor Law are sufficient guarantees that he has brought the various subjects upon which he treats in this volume up to the standard which the present day demands. In the preface he says, "This work is especially designed to supply the need of the busy American farmer, who can rarely avail himself of the advice of a scientific veterinarian. The author is deeply sensible of the low estimate placed upon veterinary medicine and surgery in the United States, and of the necessity of educating the public up to a better appreciation of its value. . . . . In the Western Hemisphere, apart from the larger cities, the great pecuniary interest in live stock is largely at the mercy of ignorant pretenders, whose barbarous surgery is only equaled by their reckless and destructive drugging. . . . . To give the stock owner such information as will enable him to dispense with the unprofitable and perilous services of such pretenders, and to apply rational means of cure, when he happens to be beyond the reach of the accomplished veterinarian, is the aim of this book, and this, it is confidently hoped, it will accomplish for all who will intelligently study its pages."

[1] *The Farmer's Veterinary Adviser.* A Guide to the Prevention and Treatment of Disease in Domestic Animals. By JAMES LAW, Professor of Veterinary Science in Cornell University, etc. Ithaca: Published by the author. 1876.

It is upon these points more especially that we would offer a few remarks. Professor Law has undertaken that very difficult matter of adapting scientific knowledge to the comprehension of the common, every-day mind. He has undertaken to combine, in what may be termed a "Popular Medical Adviser," scientific and familiar language. And in this he has succeeded; that is, so far as success is ever attained in such an undertaking.

We do not believe, except in the most simple cases, that the principles of medical treatment (it is for the treatment that such a book is most frequently consulted), dependent as they are upon so many concomitant circumstances, can be made intelligible to the busy American farmer. Especially is this the case in a great proportion of the injuries to which his domesticated animals are constantly liable. How, for example, can he treat the various lesions of the foot and leg, with any degree of satisfaction, without some knowledge of the anatomy of the parts? Nay, how can he even read intelligently on these points? It is just as impossible as it would be for the man ignorant of the first principles of astronomy, or of any other science to read and study intelligently the works of the highest authorities on these subjects. There is indeed great need, as Professor Law remarks, that the people of the United States should be educated up to a better appreciation of the value of veterinary medicine and surgery. There is an apathy on this subject in our country that cannot well be explained, especially when we take into consideration the vast pecuniary value at stake. Ignorance, barbarity, and superstition still usurp the place which should be occupied by education and tried skill. Until within a few years, no provision existed among us for instruction in matters pertaining to veterinary science. Now, however, this want has been supplied, and opportunities are offered by Harvard University and by the Amherst Agricultural College in our State, and notably by Cornell University in New York, for the prosecution of these studies, so far as may be necessary to read intelligently upon the various subjects, and to treat in a rational manner the more common diseases to which the farmer's stock is constantly liable. Even this amount of knowledge, however, can be acquired only by diligent study and faithful attendance upon lectures and recitations, the necessary time for which might be very advantageously given by many of our young well-to-do farmers, during our long winter months. Until our young men avail themselves of these opportunities now offered, and until our people generally are awakened to the importance of education in matters of such vast interest, we must wait patiently. It is difficult to understand why some of those who crowd the ranks of the medical profession do not enter upon a field where they are sure not only of abundant emolument, but of every opportunity for the acquirement of fame and for the exercise of professional skill; nor need they be ashamed of an art that numbers among its ranks men who have contributed very largely to the advancement of physiological science during the last few years, besides being eminent in other branches. They have rather to bear in mind that, to adorn this art, they must bring to their aid the advantages which can be obtained only by thorough education and indomitable perseverance.

The general appearance of the volume is excellent, and we like its arrangement. The chapters on contagious and epizoötic diseases, and on parasites

are concise, and may be sufficiently well understood by an intelligent reader, offering him a large amount of information on very important subjects. The remaining chapters, which are well classified for reference, may be advantageously consulted by the veterinary student and practitioner, as well as by others who may be sure of their diagnosis.

With regard to the preparation of the foot of the horse in shoeing, we support the opinion of Professor Law in every particular; and there can be no subject of greater interest to the farmer or to the medical man, dependent as they both are upon the services of this animal. The great points to be kept in view are the non-mutilation of the foot, by which we mean the simple cutting away of the outer wall or hoof to a proper level, the perfect preservation of the sole and frog in all their integrity, and the avoidance of all rasping of the outer crust. D. D. S.

HUTCHINSON'S ILLUSTRATIONS.[1]

THE third fasciculus of this series shows that the first issues were not intended for display, but are a fair type of what is to be expected in the future. The first illustration is the portrait of a child with extensive osseous nodes, the result of inherited syphilis. The history of this case shows the great advantages possessed by the author for illustrating a certain point, the patient in question having been kept under observation for a long series of years after the drawing was made, until his death, an account of the autopsy being given. The history of the family of which this individual was a member is strikingly characteristic of the disease in question, and is instructive reading. Next follow a picture and an account of cheiro-pompholyx, a disease hardly in place in a work of this kind. The next illustration is entitled Mercurial Teeth, which are to be distinguished from the "characteristic notch in the upper central incisors, which constitutes the test as to inherited syphilis." The author says, "The defects produced by mercury concern chiefly the enamel, although they may, when severe, affect the dentine also. The enamel is usually deficient and the surface of the tooth is in varying degrees rugged, pitted, and dirty. The incisors and canines are usually affected, and not unfrequently we see the enamel deficient on them all below a line which crosses them at the same level. The appearance produced is much as if a line had been stretched horizontally across these teeth at about their middle." We think practitioners will recognize here appearances which are by no means uncommon, and which might with as good reason be ascribed to pie and beans as to mercury, at least in New England, where we doubt not that bad food has committed far greater ravages upon the teeth than drugs are capable of. The fasciculus closes with a description of the ulcerative form of rheumatic arthritis. This is found in the smallest joints, is not attended with the deformity characteristic of the more common variety, and appears at all ages. The disease is called crippling rheumatism, as the use of the joints is greatly

[1] *Illustrations of Clinical Surgery, consisting of Plates, Wood-Cuts, Diagrams, etc., with Descriptive Letterpress.* By JONATHAN HUTCHINSON, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1876.

impaired. An examination of such a joint shows extensive ulceration of the cartilage. This variety, according to the author, has not been hitherto recognized.

If the author will adhere, as we fear he may be tempted not to, to purely clinical surgery in these illustrations, we feel sure that all surgeons will derive pleasure and profit from a perusal of them.

THE CONGRESS AND THE AMERICAN MEDICAL ASSOCIATION.

We have taken great interest in the meeting of the International Medical Congress and rejoice at its success, and now we would consider the causes of it. Comparisons between the congress and the American Medical Association have been numerous, and all to the disadvantage of the latter. Though this judgment is just, inasmuch as the meeting was far superior to any that the association has held for years, or indeed at all, yet we must remember that the two cannot be fairly compared. The association has ethical and disciplinary questions to deal with as well as medical ones. Much is gained by keeping the former as far as possible from the general meetings, but they cannot be altogether excluded, nor is it right that they should be, though they introduce a disagreeable element and endanger the harmony of the meetings. The congress was able to devote itself strictly to medical matters. The impertinent attempt of the temperance people to introduce their hobby met with slight success. Unanimity was the rule. The congress had the great advantage of having a short and definite existence. It was born and died in the same week, and will not rise again, though it will, we hope, be followed by others of its kind. It was consequently free from the many disturbing influences that surround the association. As a matter of detail we must mention with praise the admirable plan of having printed announcements of the discussions. The association can certainly profit by the example of the congress, but, as we hope that better days are in store for it, we would not have it suffer by comparing it with a very dissimilar body. We reserve for another occasion the question of the proposed union of the American and Canadian medical associations.

THE AMERICAN PUBLIC HEALTH ASSOCIATION.

This young and vigorous society will meet in Boston in the first week of October. The great hall of the Institute of Technology, which has generously been placed at the disposal of the association, is admirably adapted for its deliberations. We have received a circular stating the order of business, which promises valuable results. The plan appears to be very systematically arranged. Not only are the titles of the papers announced, but also the names of the gentlemen who are to take part in the discussions, with, in many cases, an abstract of their remarks. We highly approve of the rule limiting papers and reports to thirty minutes, and each speaker in the discussions to ten, or,

at the president's discretion, to twenty minutes. There will be addresses in the evening by distinguished gentlemen, which will be of general interest. Among the subjects for discussion at the regular meetings we notice the question of expert testimony, which we understand is to be thoroughly treated. We hope the influence of the association will be sufficient to start a reform which we have long but ineffectually advocated. By this implied doubt we touch a weak point, perhaps the only weak point, of the association. The names of its leaders make us certain that it will do good work, but unfortunately it possesses no direct power to do away with abuses or to introduce reforms. This, of course, is no reflection on the association, but is simply a public misfortune. Agitation, however, is the first step towards improvement, and this, we are sure, will be persistently but temperately kept up till it brings its fruits. Indeed, we of Massachusetts have less cause of complaint than many of our countrymen, for in our pride in our board of health we almost forget the nausea caused by the thought of our system of coroners.

MEDICAL NOTES.

— We regret to learn that Dr. C. E. Woodbury, assistant physician at the McLean Asylum for the Insane at Somerville, while in the discharge of his duties at the hospital on the 25th inst., was assaulted by an insane patient with a croquet mallet, receiving injuries of the head which, it is feared, will prove fatal. We understand that Dr. Woodbury was first knocked down, and then, when on the ground, violently beaten on the head, and his skull was fractured. This is another sad instance of the dangers to which physicians who devote themselves to the care of the insane are constantly exposed, and we hope that the fatal result may in this case be averted, though from the nature of the injuries this seems hardly possible.

— The *Medical Examiner* announces that Hofrath Gustav Simon, the well-known surgeon and professor of surgery at Heidelberg, died suddenly on the 28th of last month.

— The *Vienna Medical Press* of August 27th records the death of Max Josef von Chelius, whose standard work on surgery was translated into English by the late Mr. South, and into French by Dupuytren's nephew. Born in 1794, Chelius became a supplementary professor of surgery at the Heidelberg University in 1817, and two years afterwards was raised to the surgical chair. The first number of his popular work was published in 1822, but the work was not completed until 1838. It was justly held in high estimation, and, if princely decorations be any proof of merit, the text-book of Chelius was duly estimated, for its author received a bit of ribbon from almost every potentate in Europe.

— In an article on eu-catharsia published in the *Philadelphia Medical Times* of August 19, 1876, Benjamin Lee, M. D., discusses at some length the mechanics of defæcation. The essentials for eu-catharsia he states are: first, objectively, a support of the proper height, with an aperture of the proper shape and dimensions. Second, subjectively: (1) a healthy, vigorous tone of all the

muscles of the trunk, but especially of the abdominal muscles; (2) activity in the peristaltic action of the colon, and a normal condition of its secretions; (3) a sensitive condition of the mucous membrane of the rectum just within the sphincter; (4) a rectal cavity of normal size; and (5) a stout *levator ani*. The shape of the aperture in the seat of the stool or closet should be such as to give complete and easy support to the body without offering an obstacle to the passage of the fæces. Its sides should be parallel, its edges smoothly rounded. For an adult it should have a longitudinal diameter of from twelve to fourteen inches, and a transverse diameter of from five to seven. The subjective conditions may be promoted by such exercises as will tend to develop the abdominal and expiratory muscles without making a drain upon the nervous forces, by manipulations with a view to directly assisting the peristaltic labors of the colon, by pressure and percussion directed to arousing the sacral plexus to activity, and by direct support to the distended rectum and the paralyzed *levator ani*. The judicious and persistent use of these means, combined with hygienic measures directed to the improvement of the general tone of the system, would go far towards breaking up the pernicious use of medicinal cathartics.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DRS. CHEEVER AND GAY.

REPORTED BY GEORGE W. GAY, M. D.

A Match in the Air-Passages; Tracheotomy; Death. — A boy, one year and a half old, got a common friction match into his fauces at about one o'clock in the afternoon of February 18, 1876. While efforts were being made to seize the match it became dislodged and was drawn into the trachea. The child was suffering from whooping-cough at the time, and the paroxysms were greatly aggravated by the presence of the foreign body. He soon became much exhausted, although the respiration was moderately easy between the attacks of coughing. The patient was brought to the hospital late in the afternoon, and tracheotomy was performed by Dr. Cheever at seven P. M. The trachea was opened and searched with forceps, and the larynx was explored by one finger passed in through the mouth meeting another through the wound. No foreign body was found there, but it finally came up into sight from below, during a violent fit of coughing, was seized and removed. It proved to be a match with the brimstone burned off. The dyspnœa and other symptoms of irritation of the air-passages ceased immediately. A tracheal tube was introduced, and the child placed in a room filled with steam.

As is usual after this operation, even in fatal cases, the child remained very comfortable for several hours, when the moist râles, which were present in a moderate degree previous to the operation, began to increase; the respiration became labored, and the child died from exhaustion twenty-one hours after the tracheotomy. There was no autopsy.

As children have carried foreign substances in the trachea much longer than this little patient did, and then have made a good recovery after the removal,

it is fair to suppose that the bronchitis attendant upon the whooping-cough turned the scale against a child of so tender an age.

A shawl-pin, known to have been in the air-passages for six weeks, was removed from the trachea of a child three years old, by Dr. Cheever, in 1870. This child had pneumonia and bronchitis while the foreign body was in, but recovered perfectly after its removal.

Contusions of the Abdomen; Chronic Peritonitis; Death; Autopsy. — Mrs. M., fifty years of age, was admitted to the hospital, under our care, September 16, 1875. She was reported to have been kicked in the abdomen by her husband, about forty hours before her admission.

She was drowsy, but had her senses sufficiently to answer all questions rationally. She had no pain, except when firm abdominal pressure was made, and then complained of only moderate tenderness. There was no tympanites, but, on the contrary, the abdomen was soft and natural to the touch. A few spots of ecchymosis were found on the abdominal parietes, but nothing to indicate any severe injury. Her pulse was 80, and weak. She said she had passed no water for twenty-four hours. Her bladder was empty at the first examination, but a quart of clear urine was drawn eight hours afterward.

A compress and bandage, with some cooling lotion, were applied to the abdomen. She was put upon a liquid diet, and ordered opium *pro re natâ*.

She slept little during the night, and the next day her pulse was 128. She had no pain, delirium, nor vomiting. The urine was scanty. Her bowels moved freely after taking a laxative. She took nourishment fairly.

September 18th (third day). Patient slept pretty well during the night. Bowels acted naturally and without pain this morning. Has had no retention to-day. She seemed to be doing well, and felt so smart that she got out of bed for a few minutes, contrary to orders. Soon after getting into bed again, while sitting upright, talking to her daughter, she vomited a very offensive liquid, and fell back on her pillow, dead. Her face was livid and cold.

At the autopsy, made by Dr. Bolles forty hours after death, the peritoneal cavity contained two and a half pints of bloody fluid, by measurement. There were only slight traces of recent lymph, but abundant adhesions of considerable duration were found among the intestines. The blood in the heart and large vessels was very black and fluid. There were old adhesions of the left lung. There was no rupture of any of the viscera. The stomach was full of matter like that vomited at death. The brain and other organs were found to be healthy.

This case is of interest, not only on account of the sudden death, but also on account of the absence of pain and acute tenderness, and the apparently favorable progress of the patient up to the time of her death. There was no history of any previous abdominal or peritoneal trouble. Her injuries did not seem sufficient to give rise to dangerous inflammation, and they very likely would not have done so had the patient not been suffering from the results of a previous peritonitis.

Was her sudden death due to a heart-clot? No such clot was found after death. Was it due to a fatal syncope? Persons dying in that way are usually very pale. Was it due to a thrombus or embolus? The autopsy revealed nothing of the kind. Was is it not more probably due to a collapse of the vital powers? We know not to what else to ascribe it.

Hydrocele of the Neck; Removal; an Obstinate Sinus; Recovery. — Miss C., school-girl, aged fifteen years, was operated on by Dr. Ingalls, June 18, 1875, for a cystic tumor of the neck of several years' duration. The growth was about three inches in diameter, and the cyst wall was attached to the sheath of the carotid. The tumor was wholly removed after a careful dissection. The wound was treated by simple dressings, and the patient was discharged in ten days, nearly well.

She was readmitted in about three months, under Dr. Gay's care. She then had a sinus two inches deep, which extended to the floor of the mouth and was lined with a thick, pyogenic membrane. She was etherized, and the sinus was thoroughly cauterized throughout its whole extent with the acid nitrate of mercury.

The wound was afterward treated for two months and a half with applications and dressings of sulphate of zinc, tincture of iodine, nitric and carbolic acids, nitrate of silver, etc., with the effect of reducing the sinus so that it would not admit an ordinary probe. A small granulating spot, of the size of a pea, was all that remained, and the patient was again discharged.

Two months afterwards (February 10, 1876) she entered the hospital for the third time, and was under our care. The sinus was an inch deep. The patient was, and always had been, in a fair state of health.

The sinus was thoroughly cauterized with nitrate of silver, crystallized upon a silver probe. A thick pad of spongio-piline was firmly bound upon the sinus, leaving its orifice free. The patient was put upon a liquid diet, and ordered to talk and open the jaws as little as possible. She was well in three weeks, and remained so at the end of four months, when last heard from.

This mode of treatment is the one so highly recommended by Hilton in his book on Rest, and is a very valuable one. It is available for sinuses in various parts of the body, where the opposing walls of a sinus or wound are continually rubbing against each other, as in the above case. If some such method could be used in the treatment of fistula in ano our efforts in treating that affection without an "operation" might be more successful than they are at present.

LETTER FROM DR. HOLMES.

Messrs. Editors, — I fear that some of your readers may wrong themselves over the expressions attributed to Professor Austin Flint, in your number of September 14th, relating to Dr. J. B. S. Jackson.

He is reported as saying: "J. B. S. Jackson unfortunately, if not blamably, became satisfied with his position as professor in a leading school and curator of a museum rich in specimens. He might have been more prominently identified with pathology in this and in every other country."

The word "unfortunately" has, we think, one syllable too many. The word "blamably" sounds strangely to us among whom he has lived so long in connection with a name which we have learned to associate with the most conscientious and exact discharge of duty.

In one sense it is true that he has been "satisfied with his position." He has delighted in its duties and given his whole soul to them, and labored as no one would labor except for love of his work. The place has certainly suited him, and he has suited it with such rare adaptation that it may be doubted if the coming century will find as perfect a fit among his successors. Men like Dr. J. B. S. Jackson and Dr. Jeffries Wyman are not made in batches and replaced as easily as an empty post-hole is filled with a new stick of wood. These two men have lived in their work as very few Americans do, except in the more lucrative callings, content with labor as their only recreation, and the attainment of truth as their only reward. Dr. Jackson may have been satisfied with his position, but he was never satiated with working to bring order out of confusion, intelligible presentation out of puzzling obscurity; to preserve carefully all that the past had treasured, and to add by untiring industry to the resources of the collections of which he had charge. Remembering, too, that he was always imparting instruction in the midst of his other labors, teaching teachers as well as pupils, — for there was no visitor, native or foreign, who knew too much to profit by his lessons, drawn directly from his own observations, and illustrated by specimens of his own preparation, — I think we may say that others as well as he himself had a right to be satisfied with his position.

It may be true that "he might have been more prominently [1] identified with pathology in this and in every other country." The chorus of saints and archangels might have reached a higher note than they ever attained in the *trisagion*, for aught that we know. "Might have been" is a tub with no bottom to it. But our friend Dr. Flint may have forgotten for the moment what *has* been in this case. A professor in the University of Pennsylvania, hardly less distinguished than the eminent critic himself, characterized Dr. Jackson's first descriptive catalogue as the most important contribution which had ever been made in this country to the branch to which it relates, namely, pathology. Since the date when that work was published, and during the period in which Dr. Jackson has been satisfied with his position, he has published a much more extended catalogue, that of the Warren Anatomical Museum, which he so largely helped to make what it now is. The name "catalogue" must not lead to the undervaluing of these two admirable works. They are quarries of knowledge, say rather ready-hewn foundation-stones, which may be built on a century hence, when most of the vestiges of contemporary American medical literature will have been long effaced, and the titles of its books and the names of their authors will be known only among the dry leaves of dreary retrospects. I may, it is true, have overlooked the monumental achievements of later years, but excepting of course the magnificent volumes which our army surgeons and physicians have sent us from Washington, I think it may be still said we have had nothing so important in pathological science from any American author as Dr. Jackson's two printed volumes.

The whole country knows, or ought to know, these most valuable catalogues. But only the medical community in which Dr. Jackson has lived can be aware of all that he has done for pathological knowledge. He may be said to have

[1] JOURNAL, September 14, 1876, p. 319, for "permanently" read "prominently."

created one museum, that of the Society for Medical Improvement. He has reorganized and almost in fact re-created a second, the Warren Anatomical Museum. Look at the records of the society just referred to, and it will be seen that he has been the life of it for the greater part of half a century. If he has never made as many thousand autopsies as Rokitansky, it is only because Boston could not furnish as many as Vienna, — for there was a period of many years during which no good Bostonian could rest quite in peace at Mount Auburn, unless his internal arrangements had passed under the Rhadamanthine inspection of our great pathologist. If he had published his carefully recorded cases, he would have been as voluminous an author, to say the least, as Morgagni. But his fullest record, like that of John Hunter, like that of Jeffries Wyman, stands on the shelves where the labor of a life-time is legible. Add to these memorials the grateful recollection of the thousands whom he has taught to value sincere investigation and simple statement, by his constant example as well as his precepts, and the feelings universally entertained towards him in our medical community may be understood, without reference to the personal qualities which commend him to regard and respect. When his medical brethren begged him a few years since to sit for his portrait, to be placed in one of the museums amidst the works of his untiring hands, they felt that this unusual compliment was paid to one whom all, old and young, delighted to honor as the first American pathologist of his generation, at once enthusiastic, sagacious, accurate, indefatigable, and absolutely to be depended upon for modest truthfulness in his record of what he observed. The accomplished histologist of a new epoch may supplement Dr. Jackson's observations with a novel order of facts, but nothing can supersede the value of his exact transcripts of nature as they stand on his printed pages for those who come after him.

I feel sure that the distinguished brother professor, whose words may have been misrepresented, and are liable to be misconstrued, is as ready as any of us to do justice to all true excellence and meritorious achievement, and that he will understand my motives in taking the words ascribed to him in your number of September 14th as a fitting hint to speak of all that our profession owes to Dr. J. B. S. Jackson.

O. W. H.

LETTER FROM LONDON.

Messrs. Editors, — Mindful of the influx of London medical practitioners which the Centennial celebration and the International Medical Congress at Philadelphia are likely to draw thither, I believe your readers will be glad to find in this letter a sketch of the system of medical education, examination, and licensing now in operation in London.

I hope to make the matter so clear that when my countrymen visit your great continent this autumn they may not have to explain to very many of their transatlantic brethren how it is that, in England, only a portion of the medical practitioners are styled doctor.

The lad of seventeen and upwards who, having received a good general education, desires to commence to study especially for the medical profession is

required to pass a preliminary examination (approved by the Medical Council of Great Britain) in the ordinary subjects of general education, namely, English language, composition, dictation and grammar, arithmetic, algebra, Euclid, Latin prose, history, and geography.

There are many of these preliminary examinations, most of the various licensing bodies furnishing one or two in the year, with the necessary consequence that the standard varies very considerably, in numerous instances far exceeding the minimum insisted upon by the Medical Council. Moreover, it is only such candidates as have passed a superior preliminary examination, including two of the following subjects, natural philosophy, French, German, Greek, and higher mathematics, besides either chemistry, botany, or zoölogy, that are admissible to the higher diplomas of the chief licensing bodies.

When a candidate has given the necessary proof of the sufficiency of his general education, he is permitted to place his name on the register of medical students kept by the British Medical Council.

No technical education received prior to such registration is allowed to count as part of the curriculum required, by the various licensing bodies, of candidates for their diplomas. The duly-registered student of medicine may enter at one of the recognized medical schools; of these there are ten in this metropolis, attached to hospitals containing not fewer than one hundred beds. The medical schools afford a course of education which accords with the requirements of the licensing bodies, and it remains for the candidate, in preparing for the diploma of one or more of these corporations, to conform to the curriculum laid down by them. The licensing bodies in London are the Royal College of Surgeons of England (R. C. S. Eng.), the Royal College of Physicians of London (R. C. P. Lond.), and the Society of Apothecaries (S. A.). The order of the above accords with the frequency with which their respective diplomas are sought by London medical students. It should be added that a London student may, by adhering to the necessary curriculum, and by passing the requisite examinations, enter the medical profession by securing the diploma of any of the Scotch or Irish licensing bodies. But for the present we will confine our attention to the two corporations just mentioned, namely, the Royal College of Surgeons of England and the Royal College of Physicians of London.

Each of these colleges defines the certificates of attendance upon lectures and of practical instruction which it will require of the candidate before he is admitted to the examination for their respective diplomas of member and licentiate. In both instances the examination for the diploma, or license to practice, is divided into two parts, the primary and final. The primary examination, which tests the candidate's knowledge of anatomy and physiology, may be passed by him at any age, and at any time after the completion of his second winter's study at a recognized medical school.

Candidates must be twenty-one years of age before they are admissible to the final examination of any licensing body, and they must have been engaged during not less than four years, subsequent to their registration as students of medicine, in the acquirement of professional knowledge, according to the curriculum of the corporation whose diploma they seek, and they must have

served during nine months, as clinical clerks and dressers, in the medical and surgical wards of a recognized hospital.

At the Royal College of Surgeons of England, in the final examination for membership, candidates are examined in surgery, surgical anatomy, pathology, diagnosis, and minor surgery; the examination, which is partly written and partly oral, is rendered as efficient a practical test as possible by the introduction of patients.

The diploma of Member of the Royal College of Surgeons of England is not granted to the candidate who has passed the final examination for it until he either holds a diploma in medicine (granted by another corporation), or has passed an examination in medicine, medical pathology, materia medica, and prescribing, provided by the Royal College of Surgeons of England. The diploma of Member of the Royal College of Surgeons of England entitles the holder to be placed on the register of medical practitioners of Great Britain as a surgeon, and to practice surgery, but confers no distinctive title. The subjects for the final examination for the license of the Royal College of Physicians of London include medicine, pathology, midwifery, chemistry, materia medica, and surgery, but this last is omitted in the case of candidates who already hold a diploma entitling them to be registered as surgeons.

The license of the Royal College of Physicians of London renders the holder a physician, entitles him to be registered as such, and to practice medicine, surgery, and midwifery, but confers no title upon him, though by courtesy licentiates of the Royal College of Physicians of London are commonly styled doctor. Whilst the holder of either of the above-named diplomas is admissible on the register of British medical practitioners, and therefore entitled to practice the medical profession generally, yet the member of the Royal College of Surgeons of England can sue in a court of justice for fees in surgical cases only, whereas the licentiate of the Royal College of Physicians of London can recover fees for medical, surgical, or obstetric practice.

A few words will suffice respecting the diploma of licentiate of the Society of Apothecaries (L. S. A.), which is conferred, after examination, upon candidates who either possess a recognized medical diploma, or who have, in addition to their hospital medical school training, been apprenticed to a licentiate or member of the society. The diploma of Licentiate of the Society of Apothecaries entitles the holder to medical registration, and enables him to recover by law fees due to him as an apothecary. It is a diploma much out of fashion in the present day, when it is seldom sought save by registered practitioners, who, having but one diploma, require a second to render them eligible candidates for some public appointment.

Both the Royal College of Physicians of London and the Royal College of Surgeons of England confer titles superior to those described above, the former granting its diploma of membership or fellowship, and the latter its fellowship.

Additional power in the government of the corporation, and the distinction attaching thereto, are the only privileges which are enjoyed by the members and fellows of the Royal College of Physicians of London as distinguished from licentiates. The same is true in the case of fellows as distinguished

from members of the Royal College of Surgeons of England. Licentiates of the Royal College of Physicians of London, not less than twenty-five years of age, may obtain the membership by election and examination; but the rules of the Royal College of Physicians of London forbid its members to practice surgery; hence the membership of the Royal College of Physicians of London is sought only by those who intend to devote themselves to purely medical practice.

The fellowship of the Royal College of Surgeons of England is awarded, after a most stringent examination, to candidates, not less than twenty-five years of age, who have fulfilled a special curriculum; no higher extra-university distinction than this exists among London surgeons.

The fellowship of the Royal College of Physicians of London, which is conferred by election, is the highest extra-university distinction which a London physician can receive from his brethren. It should be added that the superior grades just mentioned are practically seldom attained save by those practitioners who aim at following a consultation or pure practice in medicine or surgery, it being very usual in the large British towns for the leading practitioners to confine their attention to but one class of practice.

In considering the above it should be borne in mind that there are many other portals to the medical profession besides those named; however, as there is considerable prospect of all of these being united into a "one portal system," little need be said of them.

The different licensing bodies grant, after examinations of various degrees of stringency, to candidates educated in accordance with the specified curriculum, diplomas which the Medical Council of Great Britain recognize for registration. In Great Britain no man can be a legal practitioner of medicine unless he is entitled to be placed on the medical register.

From the above it will be observed that, courtesy excepted, none of the diplomas yet mentioned entitle the holder to be dubbed doctor. In England the title of doctor can be obtained only from a university, after a university education, and is, correctly speaking, a degree, as distinguished from the diplomas, licenses, or qualifications such as we have been considering. Except in the case of the London University, degrees in medicine are conferred only after the candidate for them has been in residence at a university.

The degree of M. D. is usually attained subsequently to a minor degree, such as M. B. (Bachelor of Medicine) or M. A. (Master of Arts). The universities confer similar degrees in surgery, but these are rarely sought. The licensing bodies and medical schools encourage the acquirement of university degrees by enforcing only a modified curriculum of study upon their holders, a course of action which promises to bring a large proportion of university men into the medical profession.

Up to the present date it is unusual for the purely surgical practitioner to possess any university degree, whereas the purely medical practitioner is seldom without the degree of bachelor or doctor of medicine. This accounts for the distinction in the popular title of surgeons and physicians, who are here styled respectively Mr. and Dr., much to the astonishment of their American friends.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 16, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	494	24.21	29.35
Philadelphia	825,594	331	20.85	22.24
Brooklyn .	506,233	200	20.54	24.92
Chicago . .	420,000	170	21.05	19.75
Boston . .	352,758	138	20.34	26.20
Providence	101,500	29	14.85	19.02
Worcester .	51,087	19	19.34	20.91
Lowell . .	51,639	31	31.21	20.55
Cambridge	49,670	13	13.61	23.31
Fall River	50,372	22	22.71	23.99
Lawrence .	36,240	18	25.83	25.96
Lynn . .	33,548	21	32.55	19.23
Springfield	32,000	7	11.37	20.93
Salem . .	26,344	14	27.41	22.92

Normal Death-Rate, 17 per 1000.

NOSOLOGY.

MESSRS. EDITORS, — In a recent number of your JOURNAL I entered a protest against the common practice of rushing to the press with plaudits of new remedies, remedies which have not received sufficient of practical testing to enable one to speak with assurance of their merits.

Permit me on this occasion to enter a more emphatic protest against a still more objectionable practice (also too common), that of attaching new names to such trains of symptoms as may present some features not perfectly comprehended by the writers suggesting such names.

The following report of a case, copied from the *New York Medical Record*, is a marked instance of the kind to which we advert: —

"DYSPEPTIC ASTHMA. — At a late meeting of the Berlin Medical Society, Professor Hennoch detailed the histories of several cases of this affection occurring among children, which had come under his observation. The symptoms were alarming dyspnœa, with pallor of the face and lividity of the lips, coldness of the extremities, small and extremely frequent pulse, superficial and very frequent respiration, and great mental apathy. The affection apparently depended upon disturbance of the digestive functions. There were in all of the cases some tumidity and tenderness in the epigastrium; but in spite of the threatening symptoms, *not the least indication of cardiac or pulmonary disease could be found on repeated and careful examinations.* In one case, that of a child nine months old, in whom there had been constipation and vomiting, great relief was afforded by the application of numerous dry cups to the chest, and *recovery from the attack coincided with the eruption of an incisor tooth.* Professor Hennoch, although skeptical at first, ultimately came to agree with the opinion expressed by Traube, who saw the first case in consultation, namely, that the disturbance in the stomach excited a reflex vaso-motor spasm in the small arteries, whence followed the coldness of the extremities, imperceptible pulse, stasis in the venous system and right heart, cyanosis, accumulation of carbonic acid in the blood, and dyspnœa. He therefore assigns the name *asthma dyspepticum* to the affection. — *Berl. klin. Woch.*, May 1, 1876."

The italics are my own.

Thus we have a case of *simple dentition* expatiated upon learnedly, treated empirically, and named inappropriately. A very tyro in the profession should have observed that the age of the child, the condition of the gums, and the general train of symptoms indicated the source of the disturbance. We are *not* surprised that "the recovery from the attack *coincided with the eruption of an incisor tooth*," but we *are* surprised that the condition of the

stomach was not recognized as being purely sympathetic. From the *fact* that "*not the least indication of cardiac or pulmonary disease could be found on repeated and careful examinations,*" the name selected, *asthma dyspepticum*, becomes doubly inappropriate.

Our nosological table is already too much extended, and the progress of our science necessitates frequent additions; precision of nomenclature should therefore be observed, and designations which tend to obscure or confuse (as in the above instance) should be carefully avoided.

The apology for the character of the above criticism may be found in the feelings naturally engendered by reading the article which is the subject of the criticism.

Yours, H. R. R.

Books and Pamphlets Received. — Specialists and Specialties in Medicine. An Address. By M. H. Henry, M. D. New York: William Wood & Co.

Report of the Committee on Medical Education made to the Medical Society of the State of California. By James F. Montgomery, M. D., Chairman.

A Contribution to the Study of the Transmission of Syphilis. By R. W. Taylor, M. D. (Reprinted from the Archives of Clinical Surgery, September, 1876.) New York: Routledge & Co. 1876.

Micro-Photographs in Histology, Normal and Pathological. Vol. i., No. 2. By Carl Seiler, M. D., in connection with J. Gibbons Hunt, M. D., and Joseph G. Richardson, M. D. Philadelphia: J. H. Coates & Co.

Upon some Points in the Ætiology of Hereditary Syphilis. By F. R. Sturgis, M. D., Clinical Lecturer on Venereal Diseases in the University of the City of New York. (Reprinted from the June number of the Chicago Medical Journal and Examiner.)

A Contribution to the Treatment of Uterine Versions and Flexions. By Ephraim Cutter, A. M., M. D. Second Edition, entirely re-written. Boston: James Campbell. 1876.

Yellow Fever and Malarial Diseases. By Greensville Dowell, M. D., Professor of Surgery in Texas Medical College, etc. Philadelphia: Medical Publication Office. 1876.

Human Rights as Exemplified in the Natural Laws of Marriage, Legitimacy, and Life in General. By George J. Ziegler, M. D. Philadelphia. 1876.

Reply of Dr. Frothingham to a Member of the Michigan State Society on the Subject of Homœopathy in the University of Michigan. (Reprinted from the September number of the Peninsular Journal of Medicine.)

A Clinical Lecture on the Use of Plastic Dressing in Fractures of the Lower Extremity. By David W. Yandell, M. D. Indianapolis. 1876.

Transactions of the Medical Society of New Jersey. 1876.

Typho-Malarial Fever: Is it a Special Type of Fever? By J. J. Woodward, Assistant Surgeon U. S. A., in charge of the Representation of the Medical Department U. S. A. at the International Exhibition of 1876. Philadelphia.

Appointments in the Medical Staff, M. V. M. — The following appointees having successfully passed the Board of Medical Officers authorized by G. O. No. 24, A. G. O., current series, have been commissioned: —

Benjamin H. Hartwell, Assistant Surgeon (rank first lieutenant) Tenth Regiment of Infantry, from September 18, 1876.

William A. Dunn, Assistant Surgeon (rank first lieutenant) Battery A, Light Artillery, from September 21, 1876.

Resigned and discharged: Assistant Surgeon Levi Howard, Co. F Unattached Cavalry.

Suffolk District Medical Society. — There will be a regular meeting on Saturday evening, September 30th, at seven and a half o'clock. The following papers and cases will be read: —

Dr. E. H. Bradford: Cancer of Breast; Removal; Antiseptic Treatment.

Dr. C. E. Wing: Vaginal Ovariotomy.

A. L. Mason, *Secretary.*

Medical Library Association. — The annual meeting will be held at No. 5 Hamilton Place on Tuesday, October 3d, at four o'clock, P. M., Dr. O. W. Holmes, the president of the association, in the chair. The librarian and treasurer will present their reports.

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A CASE OF CEREBRAL HÆMORRHAGE AND DEATH FOLLOWING THE ADMINISTRATION OF ETHER.

BY ARTHUR MATHEWSON, M. D., BROOKLYN, N. Y.

THE history of the following case seems worthy of publication from its bearing on the question of danger in the use of anæsthetics.

A German woman aged forty-eight years, of moderately stout habit, with pale complexion, but complaining of no previous sickness, had complete posterior synechia in the left eye, the result of an iritis which occurred some years before. An iridectomy was done for the improvement of the condition of the eye at the Brooklyn Eye and Ear Hospital, June 22, 1876, at 4.30 P. M.

Two fluid ounces of Squibb's ether were put into Squibb's apparatus for anæsthetizing, and were administered by Dr. Rushmore, who is an expert in its use. With unusual quickness, two minutes by the watch, the patient was completely under its influence, having taken it very quietly, without struggling, and without becoming cyanotic. She lay breathing quietly as in ordinary sleep. The operation was very brief, and the ether was at once removed, having been inhaled less than five minutes. In a few minutes more the patient began to recover from the influence of the anæsthetic, crying and talking in a maudlin way. As no unusual symptoms occurred, and as the patient was apparently doing well, she was left with an attendant.

Fifteen minutes later, Dr. Cornwell, the house surgeon, was called to see the patient, the attendant saying that she had a "fit," and reporting that five minutes after we had left her there had been several ineffectual efforts to vomit, which were followed in a "couple of minutes" by the "fit." Dr. Cornwell found her cyanotic, breathing stertorously, bathed in profuse perspiration, and unconscious. The pulse was 120 per minute, soft and compressible. I saw her at 5.30 P. M., when she was in much the same condition, presenting the symptoms of cerebral hæmorrhage. As inspiration seemed to be impeded by the drawing in of the alæ of the nose, the lobe was pulled upward by a strip of adhesive plaster fastened above to the forehead, so as to dilate the nostrils and thus render breathing less difficult. For a short time

after this the symptoms improved, and before eight P. M. the patient had recovered her consciousness, and answered questions by movements of the head. The urine passed involuntarily, and there was hemiplegia of the left side.

The next day she was able to take some nourishment, and to answer questions in monosyllables. Before midnight, however, the symptoms became more serious, and death occurred on the morning of June 24th, about thirty-seven hours after the ether was administered.

A post-mortem examination was made on the afternoon of the same day by Dr. J. C. Shaw, in the presence of the hospital staff and Drs. Segur and Lowell. On removal of the calvaria a large hæmorrhagic patch was found under the arachnoid on the upper surface of the middle portion of the left hemisphere. The vessels of the left hemisphere were much fuller than those of the right, and there were numerous capilliform extravasations.

Further examination of the brain revealed the presence of a large clot in the right lateral ventricle, and the corpus striatum and optic thalamus were softened and broken down. There was also a small hæmorrhage in the left lateral ventricle. There was extensive atheromatous degeneration of the vessels at the base of the brain. No other organs than the brain were examined.

The writer's experience in this case will not deter him from using ether in preference to any other agent in cases where anæsthesia is very desirable, but will make him more careful in the examination of patients previous to operation, and will lead him to dispense with anæsthetics so far as possible, where there is reason to believe that the blood-vessels are diseased or weakened.

FRACTURE OF THE PATELLA TREATED BY SANBORN'S METHOD; UNUSUALLY GOOD RESULT.

BY M. A. MORRIS, M. D.

THE following case occurred in the service of Dr. D. W. Cheever, at the City Hospital, while the reporter was serving under him as house surgeon.

On the 30th of November, 1872, C. F., aged forty-five years, a stout, muscular laborer, fell on the street while intoxicated, and fractured his left patella. The bone was broken transversely through its middle, and the lower fragment longitudinally, making a T-shaped fracture. The interval between the upper and lower pieces was three quarters of an inch, and that between the two lower fragments was very slight indeed. The amount of swelling about the joint was moderate. The limb was put on an inclined plane, with the heel well raised, in a long

fracture box which extended two thirds of the way up the thigh, and an evaporating lotion and a figure of eight bandage were applied. On the tenth day Sanborn's method was adopted. (This consists in sticking a long strip of plaster to the anterior surface of the thigh and leg, and securing it by a neatly-adjusted bandage; a loop is left over the knee-joint; under this loop and above the upper fragment is placed a pad or a roller bandage, and another in the same manner below the lower fragment. A piece of stick is inserted into the loop, and by twisting the loop by means of the stick the rollers are forced towards each other and drag the fragments of the patella with them.) By this means the fragments were kept in almost perfect apposition, there being only a tendency of the broken ends to tilt upwards; this was overcome by the pressure of a bandage passed around the joint. On the forty-fourth day a dextrine bandage was applied, and the patient, a few days later, was allowed to go about the ward on crutches, and, two weeks afterwards, to his home, the fracture having apparently united by bone. There was anchylosis of the knee-joint, but he refused to have passive motion practiced. Not long since this man stopped the writer on the street, and pulled up the leg of his pantaloons to show how perfect his knee-pan was. The utmost care was required to discover that ligamentous and not bony union had taken place. At first the attempt to obtain motion between the fragments failed, it was so limited. It is now nearly four years since the accident occurred, and the patient declares that the limb is as strong and perfect in every way as it ever was.

About ten months ago the writer saw a young lady, twenty-four years old, who, in stepping from a train, slipped and fell, striking the left patella against the platform, while the limb was flexed, causing a fracture of the knee-pan through its lower third transversely. Sanborn's method was adopted in this case, and when the apparatus was removed at the end of seven weeks the space between the fragments was probably less than a tenth of an inch. The patient was advised to keep the limb in a straight position, and two weeks later an elastic knee-cap was adjusted.

Regarding the time when passive motion should be commenced, Sir A. Cooper and others say that it should be carefully employed at the end of five weeks in adults, and a week later in elderly subjects.

Bryant says, "To allow the patient to flex the limb under three months is a hazardous proceeding, for the uniting ligament is sure to be stretched and elongated, and the limb weakened." Erichsen is of the same opinion.

TYPHOID FEVER.[1]

BY WILLIAM LEAVITT JACKSON, M. D.

I HAVE had the opportunity of observing and following thirty-seven cases of typhoid fever, which I have endeavored to tabulate in most of their important considerations. Twelve were women, twenty-five men. For the six months beginning July 1, 1875, the number of cases admitted to the South Side of the Boston City Hospital per month was as follows: July, two; August, five; September, eleven; October, ten; November, four; December, five; showing markedly the greater prevalence of the disease during the months of September and October, inasmuch as during those two months more than one half the cases occurred. The greater number of these came from our out-lying city wards, and especially from that part of South Boston in the immediate vicinity of Dorchester Avenue; five cases originated in the hospital itself, among the nurses and help; these last, however, are not all included in the thirty-seven. When received these cases had had an average duration of about one week, and the symptoms were generally well developed.

The average age was twenty-five and a half years, the youngest sixteen and the oldest fifty. Twenty-four cases began with a chill, in some instances very severe, resembling in commencement a case of pneumonia; in others there were merely slight chilly sensations; these chills were sometimes repeated, rarely imitating intermittent fever, from their succession.

Twenty-eight spoke of general pain, which was referred principally to the head, back, and limbs. The headache was sometimes so intense as to necessitate special treatment.

Epistaxis occurred in sixteen cases, and was generally slight in amount, recurring several times.

There was cough in twenty-five cases, usually dry, but attended at times with the expectoration of pearly, white, tenacious mucus. Physical examination gave well-marked bronchial râles.

Seven exhibited difficult or blunted hearing; in three others there was otorrhœa.

Thirty-four showed well-marked abdominal symptoms, such as tympanites, tenderness, and gurgling. Not always were the three associated in one case, but at least two occurred, most frequently tympanites, next gurgling, and least often tenderness. In but two cases did tympanites become a very troublesome symptom, and in these it developed just before death. In some instances the abdomen was extremely tender, causing shrinking even at the slightest touch. In three cases only did diarrhœa continue throughout, whereas in seventeen there was con-

the remaining seventeen were accounted for as mixed, that is,

[1] Is presented for graduation at the Harvard Medical College, June, 1876.

both diarrhœa and constipation were observed. As summer passed into autumn and autumn into winter, diarrhœa became less and less common until constipation was the rule. In the mixed cases the greater proportion entered with diarrhœa, either from the natural tendency of the disease or as the result of indiscriminate dosing. With strict regimen and proper care the diarrhœa generally stopped spontaneously. As convalescence began, constipation occurred in most cases. Seldom did diarrhœa originate in the hospital. None of the cases were complicated with perforation, peritonitis, or hæmorrhage.

Rose spots occurred in twenty-six cases, blue maculæ in two, and in one case both. As has been noted by numerous observers, the blue maculæ are not indicative of greater severity of the disease; in fact, these cases were of the milder type. Sudamina were observed in nearly every case, attended with free perspiration.

Sixteen patients had delirium; in some it was very wild and with difficulty restrained; in others it was muttering, stupid, attended with subsultus and carphologia.

In thirteen the pulse rose to 120 or over. It was generally full and bounding in the first part of the disease, afterwards becoming more rapid, feeble, thready, at times dicrotic, and having an upward tendency towards death.

In twenty-four cases the temperature reached 104° F. or over, on one occasion mounting as high as 106½°. The patient in the latter case recovered. Two cases in which the temperature remained high in the morning, with but little fall from that of the previous evening, eventually proved fatal. In none of the fatal cases did death seem to be due immediately to intense heat, the temperature always falling before death.

The pulse is the best guide in determining the prognosis, although the temperature is invaluable as an indication of the progress of the disease and for treatment. In cases where the pulse reached 120 or over, and remained at this height for several days, there were few recoveries, whereas the high temperature of 106½° was attended by no very severe symptoms.

The duration, calculated as well as could be after Flint's manner of dating the commencement of the disease from the time of taking to bed until convalescence, that is, after temperature and pulse had been near the normal for two or three days, and the patient had been allowed liberal diet and was out of bed, averaged twenty-six days. In those that died the average duration was fourteen days, in those that recovered twenty-eight days. Towards the last of the year, as the cases diminished in number, the type became more severe. Of the six deaths one occurred in November and three in December. The urine was retained in all the severe cases, probably owing to blunted sensi-

bility. Relapse took place in two instances, and, although one was very sick, both recovered, convalescence being protracted.

Pneumonia developed in two cases. In one, but a small amount of lung was invaded; in the other, both lungs were partially involved and death resulted. In one case marked phlebitis developed, which subsided under proper treatment; in three others pain, stiffness, slight swelling of one limb, and lameness were noticed, disappearing in time with rest. In two cases extensive hæmorrhage into the conjunctiva, just external to pupil, was seen. There was one fatal case of parotiditis. Trousseau says, "This is a very formidable complication, from which I have almost never seen a fever patient recover." Signs of phthisis developed in one case, dementia followed in one, erysipelas of face in one, and hypertrophy of heart with no determinable valve lesion in one. One of the cases which eventually proved fatal developed hypertrophy of the heart; there was marked heaving of the chest, a præsystolic souffle, and a purring thrill over the apex. The lungs became filled with bronchial râles, the pulse grew weak and fast, and death ensued.

Loosening of the teeth is a frequent sequel, due to an accumulation of tartar, causing retraction of the gums; the gums themselves become unhealthy, red, and flabby.

No very severe bedsore was developed during the treatment; slight superficial excoriations over the sacrum occasionally occurred.

The treatment of these cases, as practiced under the surveillance of Drs. Stedman and Draper, was a modification of the bathing process, occupying an intermediate position between the full carrying out of cold-water bathing and the expectant treatment. On entrance patients were immediately put to bed, and their diet restricted to milk, of which they were expected to drink about two and a half quarts in twenty-four hours; this was perhaps the most important part of the treatment; at first they may have objected to milk, but on becoming accustomed to it they took it freely. To keep up the strength was the chief aim, and if insufficient nourishment were taken, by giving a small amount at regular intervals the end sought for was accomplished. This diet was continued till the temperature has been normal for several days, when light soups and easily digested farinaceous articles were given; in a few days more, a gradual return to regular though still somewhat restricted diet was allowed. It was interesting to note the slight rise in temperature following the return to solid diet.

To lower the temperature sponge baths of equal parts of cold water and alcohol were quickly applied to the surface of the body, which was immediately dried. This is most grateful to the patient, especially at night, if he is sleepless and uncomfortable. In a case marked by great and almost constant, active delirium, which lasted several days,

and bade fair to cause the death of the patient, sleep was finally procured by these means. The full bath was attempted, but on account of the violent struggles it was not deemed prudent to repeat it.

The full tub baths were given to twenty-six patients; of these five died; generally not more than one, and never more than two baths were given daily. The temperature of the bath at the time of immersion is about 100° and is quickly reduced, by the addition of cold water, to about 80°, which is as low as the patients will generally tolerate. About an ounce of sherry is now given, and the patient quickly rubbed dry and put to bed. This treatment is often resisted for the first few times. The bath is almost always followed by marked improvement in general symptoms, especially in the morning temperature, which has been observed to fall five or six degrees. After a full bath the pulse becomes fuller, stronger, and less rapid, delirium disappears, perspiration sets in, and the patient becomes drowsy and generally falls to sleep. The general indication for the giving of a bath was a temperature of 104° in the axilla; but whenever there was a tendency to high evening temperature with but little morning amelioration, baths were given. The evidence given by the success of the baths in combating the ataxic form of typhoid fever leads me to believe that in their frequent use we have great protection against this much-dreaded type of the disease; whereas, in the adynamic, that form in which we are called upon to support the powers of the system, we have no very reliable mode of treatment; this latter form gave the most trouble and anxiety. All the cases, if we except the anomaly appended, died from a gradual sinking of the vital power. In alcohol, judiciously given, it is true, we have a very valuable auxiliary, but in few cases has it appeared of any lasting benefit where the adynamic symptoms have been well developed. There always seemed to be a rally after the administration of stimulants, but it was only temporary, shortly giving place to prostration, from which there was no recovery. Without doubt alcohol is the most reliable remedy in our control, yet it is far from sufficient in many cases. It may be said that perhaps stimulation was not resorted to soon enough, and yet, whenever the condition was observed to approach the adynamic, alcohol was immediately given; in some cases this change was extremely rapid, and not to be anticipated. Dr. H. C. Wood speaks favorably of small amounts of wine given throughout the sickness.

Sulphate of quinine was tried thoroughly in the hospital, under other physicians, with very favorable results, reducing both temperature and pulse, but in a few of our worst cases with only temporary benefit. The method of administration was to give ten grains every hour for three or four hours, commencing at six P. M. The principal objection to this treatment is the disturbance of digestion which is so apt to follow.

Digitalis has been advocated by Wunderlich, and by other German, French, and English observers, on the ground of its reducing temperature and of its stimulating heart action; of late, however, the advisability of giving it has been questioned. Ackermann says that it diminishes the number of pulsations, but at the same time the arterial tension; its action on the digestion, causing nausea, vomiting, etc., he thinks is a strong contra-indication to its use in a disease in which the functions of the digestive system are so important; its antipyretic action lasts but a short time, unless the drug be given continuously. In short, its efficacy is doubtful, and, if given at all, it should be only in those cases where we are sure that there is no cardiac weakness. Liebermeister says, "Digitalis is only to be used in those cases of typhoid fever in which there is no considerable degree of cardiac weakness, where the pulse is not yet extremely frequent, or at least is still pretty strong. The rule for its application is just the opposite to what it is in diseases of the heart; now the more frequent the pulse the less is digitalis indicated. The impending paralysis of the heart is not prevented by the use of the drug, but seems rather favored thereby. No special harm is done, in patients with powerful action of the heart, if the administration of a large dose causes nausea and vomiting; of course the medicine must then be stopped." The limited experience here showed it to be of but little or no benefit; in one case, in which there was great irregularity of the heart, it did certainly cause temporary benefit in regulating and somewhat slowing the heart's action. The evidence here given, from such eminent authority, of the inadvisability of prescribing the drug for the weak, fluttering pulse of typhoid in those cases in which it has been so much advocated by others as being, *a priori*, a heart stimulant, appears to be very decided, and, taking into consideration the dangerous power of the drug, it seems better to let it alone until, in the light of future developments, we shall see our way clearly.

In the mild cases of diarrhœa nothing was done, two or three loose dejections per diem not being considered harmful; when, however, it became excessive it was generally quickly checked by a pill composed of a grain of opium and a quarter of a grain of sulphate of copper.

In delirium and wakefulness, when the patient could be made to tolerate it, the ice-cap was of great benefit.

The frequent use of a mouth-wash of equal parts of glycerine and rose-water is very pleasant to the patient, relieving the foul taste and dryness of the mouth.

In two very mild cases twenty drops of dilute nitro-muriatic acid were given every two hours.

Excepting the medicines above mentioned no drugs were given, but every attention possible was shown to the comfort, nourishment, sleep, and general welfare of the patients, keeping in mind the especial dan-

gers of the disease. The marked benefit of occasional bathing I have noted, and should like to see the full bath treatment thoroughly carried out.

I will give a full account of one case because of its peculiarities.

P. M., a laborer, aged thirty-five, entered the hospital September 8, 1875. He was unable to give an account of himself. The mind was wandering, body emaciated, and breathing asthmatic. There was no cough. The patient intimated that he had pain on swallowing, and traced out the course of the œsophagus as painful. There was gurgling in the right iliac fossa. The abdomen was tender. There was slight tympanites and nausea. The skin was cool, the tongue dry and red. The pulse was 70, weak, and regular. There were no rose spots. The lungs and heart were normal.

September 9th. Epistaxis occurred last night. Pulse this morning 40, sufficiently full in force, both systole and diastole being perceptible at wrist; mind clear; tongue moist; patient hungry; hiccough.

September 10th. Pulse 40, with occasional irregularity of beat; mind clear; temperature 97°; everything was vomited, the ejected matter being bile and mucus, not offensive. The patient complained of pain about the epigastrium and in the course of the œsophagus. The abdomen was not tympanitic. The lower edge of the liver was plainly felt three inches below the costal margin. The bowels were confined. There was no especial tenderness over the epigastrium. The tongue was dry, clean, and very red. Nutritive enemata were given every two hours, but at seven P. M. the patient died.

At the autopsy, twenty hours after death, the spleen was found to be very large, dark, and friable. The liver showed nothing remarkable. The kidneys were much enlarged, whitish or ashy, not friable nor amyloid, but chiefly fatty. In the intestines, many ulcerations of the lower Peyer's patches, and in the ascending and transverse colon were found. In such a case as this it would be nearly impossible to make a diagnosis before an autopsy.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.

BY F. I. KNIGHT, M. D.

Operative Treatment of Pleuritic Exudations. — Ewald[1] contributes an interesting article on this important subject. The cases used for a text are those which have occurred in Frerichs's clinic during the past fifteen years. From 1860 to 1870 only medical or expectant treatment was employed; after 1870 thoracentesis was resorted to when life was threatened, or when the effusion remained longer than four weeks. During the fifteen years two hundred and fifty cases came under observa-

[1] Charité Annalen, Band i.; Allg. med. Central-Zeitung, March 8, 1876.

tion, of which thirty were fatal; of these, two hundred and four were cases of serous effusion (four of these being fatal); thirty-five were cases of empyema which were operated upon (nineteen fatal); and eleven were cases of empyema which were not operated upon (seven being fatal).

There was no fatal case of simple serous effusion in which puncture was performed, but four proved fatal in which it was not done. The most favorable time for puncture seemed to be from the fourth to the eighth week. Before the fourth week there is danger of re-accumulation of serum, and after the eighth of the lungs not expanding. In only 3.86 per cent. of Ewald's cases did re-accumulation occur. In no case in which the puncture was made after the fourth week, with a careful exclusion of the air, did the exudation become purulent. This complication can be avoided if the puncture is deferred till after the subsidence of the fever, and after the amount of fluid has stopped increasing.

In regard to the method of puncture the author thinks that the air should be excluded as long as the question whether its entrance does any injury or not remains unsettled. He discards all methods which make use of a previously-prepared vacuum for aspiration, that of Dieulafoy and others, as he thinks the sudden withdrawal of the fluid may lead to a rupture of the lung. He prefers to let the fluid empty itself, except in rare cases where a negative pressure or a tenacious fluid is present, when suction may be used. The trocar is always carefully cleansed with carbolic acid before being used. Albuminous expectoration has never been observed by Ewald. The peculiar amphoric sound heard frequently after puncture he attributes to carbonic acid gas given off by the effusion into the empty pleural cavity.

In the cases of empyema which were simply punctured the mortality was 77.7 per cent.; in those where an incision was made, 46 per cent. Of eleven who survived the operation of incision, seven only could be considered really cured.

According to the author's estimate, only sixty-eight in a thousand cases of empyema which are punctured have a prospect of cure, but five hundred and twenty-three in a thousand in which incision is made. And in a thousand cases one would meet with nine hundred and twenty-eight in which simple puncture, if performed, would have to be followed by incision. Ewald made his incision, between the mammillary and anterior axillary lines. The pleural cavity was syringed with various disinfecting and stimulating solutions. Resection of one or more ribs was made in those cases where they were crowded closely together. The patients who died succumbed in about equal proportions to lung disease, and to other complications, as endocarditis, pericarditis, peritonitis, pyæmia, etc., and one, who died soon after the operation, had thrombosis [illegible] cerebral arteries.

Finally, the author gives the following *résumé* of his experience: —

(1.) Puncture should be employed before the third week, in case of serous effusion, only to avert imminent danger. Puncture in the third or fourth week, if improvement has not already begun, is most favorable as to mortality and prognosis.

(2.) A serous effusion will not become purulent if the puncture be made with disinfected instruments and if the air be excluded.

(3.) In every case of pleurisy we must ascertain by exploratory puncture whether the fluid be serous or purulent.

(4.) Purulent pleurisy must be incised as soon as possible, not punctured.

(5.) The mortality after incision in purulent pleurisy is at present between fifty and sixty per cent.

(6.) Bloody exudations are always due to malignant new-formations in the pleura.

(7.) Serous exudations do not preclude the existence of tuberculosis or cancer of the pleura.

Puncture of the Pericardium; Copious Discharge from the Fistulous Opening for Five Months; Recovery. — M. Villeneuve [1] reports the following interesting case. On May 17, 1873, he was called by a colleague to see a child five years and a half old, suffering from pericarditis. The little patient's face was swollen and mottled, his eyelids swollen, his lips blue and cold, and his pulse too weak to be counted. The lower extremities were cold and œdematous up to the thigh; the scrotum was infiltrated. A very marked arching, of the size of the hand, was observed at the præcordial region. This arching was distinctly fluctuating, and presented an undulating movement corresponding with the respiration. This was short and strongly whistling. Auscultation of the anterior portion of the chest gave no results. Neither respiratory murmur nor heart-sound could be heard. Nothing could be heard at the posterior part of the thorax but the resonance of the whistling respiration and some sibilant râles. According to the account given by the parents of the child, this condition was the consequence of a fall on the chest two months previously, after which he began to suffer from dyspnœa and swelling of the legs. The treatment adopted was diuretic drinks and the application of seven leeches to the præcordial region, followed by seven blisters in succession on the same place. No improvement followed this treatment, and Villeneuve was called in consultation. He believed the child to be dying. Not knowing what medical plan of treatment to adopt, with the consent of the parents, to whom he explained that the expedient was but a forlorn hope, he applied Dieulafoy's aspirator at the most projecting point of the tumor, where it was also the most fluctuating, and removed two syringefuls of a perfectly trans-

[1] Marseille médical; London Medical Record, September 15, 1875.

parent, lemon-colored fluid. When the canula was removed the small wound remained open, and a somewhat powerful jet of liquid spurted out. This was attributed to the thinning of the wall of the cavity by the repeated application of blisters. Very much annoyed by this accident, Villeneuve quickly put his finger on the opening, and had some difficulty in closing it with cross-pieces of diachylon plaster, because the child, who began to recover from the asphyxial stupor, cried, threw himself about, and caused a small amount of serous matter to exude from the puncture every moment. The dressing was completed by a compress, held in its place by a pledget of lint and a small bandage around the body. On applying the ear to the chest the pulsations of the heart could now be heard, confused and tumultuous. The pulse could now be counted, 160 beats in the minute. The symptoms of asphyxia also gradually improved, and the child was left in a very satisfactory condition. From that time forward the improvement continued; the œdema gradually decreased, the appetite returned, and the pulse became regular. But the puncture did not close, and the serum continued to flow copiously, and even in jets, at every dressing, which was done twice in the twenty-four hours. After some days the serosity became less transparent, thicker, and finally quite purulent; it continued to flow copiously for five months. The patient, however, left his bed, walked, and recovered his appetite. About that time an abscess formed at the level of the wound and was opened. Only healthy pus escaped. This abscess healed, and the pericardial fistula yielded a smaller and smaller quantity of pus until it closed up entirely, on the sixth month after the puncture. From that time the child regained health, and is now, as far as can be ascertained, perfectly well.

Subcutaneous Injection of Carbolic Acid in Phthisis and Tuberculosis. — Schnitzler[1] has been encouraged by his success with the subcutaneous injection of carbolic acid in a severe case of diphtheria, which resisted all other treatment, to try its use in other febrile conditions, especially in the fever of phthisis and tuberculosis. During the months of June and July he treated more than one hundred cases in this manner. The injections were made once, in a few cases twice, a day, one to two Pravaz's syringefuls of a one to two per cent. solution of carbolic acid being thrown in each time, usually into the back or front of the chest. The result in a large majority of cases was a diminution of fever, as shown by the temperature and pulse, and a marked improvement in general condition, in a few cases even the cough and expectoration seeming to be improved. The injections were continued daily, in many cases for several weeks, almost without interruption. Although it is too soon to form a judgment on the probable influence of carbolic acid on the general course of this disease, Schnitzler thinks, in consideration

[1] Wiener med. Presse, No. 32, 1876; Allg. med. Central-Zeitung, August 9, 1876.

of its undoubted action on the fever, that a curative influence on the entire course of the disease is not improbable.

The author has never observed any injurious effect from the injections. The patients experience no more pain from them than from subcutaneous injections of morphine, the local burning sometimes continuing a little longer. Occasionally there was slight inflammation, but it was never serious.

In a subsequent note Schnitzler states the amount of carbolic acid injected each time to have been from one to two centigrammes.

Embolism after Thoracentesis. — B. Förster[1] mentions the case of a young man who was tapped for a pleuritic exudation which had existed nine months. Aspiration was performed. There was momentary relief to the respiration, but the next day the patient complained of pain in the loins, and the quantity of urine was diminished. Later, severe pain came on in the right leg, then loss of sensation and pulsation, followed by the same symptoms in the left leg, and gangrene of both. With the appearance of pleuritic effusion on the left side the patient died, on the twelfth day after the puncture. The autopsy showed a hard embolus in both common iliac arteries, a free clot in the left ventricle, and another in the left auricle, projecting from a pulmonary vein of the right lung; in the liver and kidneys hæmorrhagic infarctions were found. It is probable that old clots which had been present in the veins of the right lung, when it was compressed, were released by the expansion of the lung and made their way to the left side of the heart, and thence to the arteries which they obliterated.

Sudden Death during Thoracentesis. — Besnier[2] reports a case. A middle-aged lady had suffered during about a fortnight with signs of a severe pleurisy on the right side, with extensive effusion. There was no cardiac complication, but the general condition of the patient was indifferent, and the fever ran high. It was noticed that the intercostal spaces were unusually tender on the affected side. On puncture with the aspirator, a sanious and extremely offensive liquid was evacuated. Scarcely half a pint had been slowly withdrawn when the patient suddenly became extremely pale, her features became fixed, and it was found that the heart had ceased to beat and the opposite lung to breathe. All efforts to restore animation failed. Death had been almost instantaneous. There was no post-mortem examination.

M. Besnier suggests that the mere pain of the puncture may possibly have reflexly arrested the heart. In enfeebled and very depressed subjects very slight causes may suffice to induce fatal syncope, even if the muscle of the heart be healthy. Bernard, Chossat, Bernstein, and others have shown that in animals even a slight amount of pain may

[1] Gaz. hebdom., No. 51, 1876; Centralblatt für Chir., No. 34, 1876.

[2] London Medical Record, September 15, 1875.

suffice to stop the heart in contraction, particularly if the animal happen to be much enfeebled.

This case, far from furnishing a contra-indication to thoracentesis, is rather a proof of the danger of delay. The patient's strength had rapidly given way, just as occurs in other forms of gangrenous inflammation.

Le Progrès médicale[1] gives two other cases in connection with this one. In July, 1875, a similar case was observed by Legroux. A man fifty-two years old had had pleuritic effusion on the left side for five weeks. The heart was displaced, and the dyspnœa was such as to suggest thoracentesis. This was done with Potain's apparatus and a number two canula in the seventh intercostal space, in the axillary line. It was necessary, during the evacuation of the fluid, to draw the canula back a little, as something rubbed against its extremity. The lung expanded and the heart returned to its normal position. Between two and three quarts of a brownish-red, fibrinous fluid, which coagulated in the air, were drawn off, and then the canula was removed. The patient was much relieved, sat up in bed, and chatted pleasantly with his neighbors, and there was every prospect of the best result. Three quarters of an hour after the operation he called for something to drink, said he felt unwell and weak, sank back on the pillow, and died.

Reynaud related a case which occurred during his service at the hospital Neckar. A strong, athletic man, forty-two years old, was brought in one evening, suffering from pleurisy. He said that he had been suffering several days, complained of distressing dyspnœa, and said that he was obliged to sit up at night in a chair. On examination the percussion was flat all over the left chest, and nowhere on this side could the respiratory murmur be heard. The heart was pushed over to the right. Aspirators had not then been introduced, so Reynaud made a little incision in the skin with the lancet, and then let the instrument glide into the intercostal space, so that he could insert the trocar. Before this latter could be accomplished the patient fainted and died.

Resection of the Rib in Empyema. — Peitavy[2] records two cases of empyema treated by resection of a portion of the rib, for the purpose of permanently widening the aperture, and so facilitating both the discharge of pus and the injection of fluids. In the first case, that of a patient aged sixty-four, pus was removed by incision six weeks after the first symptoms. In spite of washing out the chest by the double catheter, injection of tincture of iodine, and the use of a drainage tube, pus was retained, and the patient suffered from fever, with evening exacerbations, rigors, loss of appetite, and increasing weakness. Attempts to dilate the aperture with laminaria caused great pain, and it became im-

[1] Allg. med. Central-Zeitung, August 19, 1876.

[2] Berl. klin. Woch., May 8, 1876; London Medical Record, August 15, 1876.

possible to wash out the chest properly. Finally, five months after the incision, a portion of the seventh rib, somewhat more than an inch in length, was removed with the chain-saw. Pus escaped, a drainage tube was inserted, and the symptoms were relieved from that time. The tube was removed after a month, and in another fortnight the wound had closed. In the second case, that of a patient aged fifty-six, the result was less striking. Two weeks after the first incision, and only seven weeks after the first symptoms, a portion of the eighth rib was excised, and a tube inserted. Fever, however, continued, and as injections caused coughing and dyspnœa, the tube was removed after twelve days. The case was complicated by a bronchial fistula, but was completely cured about two months after the resection. A third case of empyema is recorded from the practice of Professor Simon, in which resection of the rib acted not so much by allowing the free discharge of pus as by permitting the approximation of the ribs and obliteration of the cavity. Peitavy prefers resection to Fräntzel's practice of fixing in a silver canula, because it is less painful, and less irritating to the pleura, and tends to diminish the size of the cavity.

(*To be concluded.*)

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

JAMES R. CHADWICK, M. D., SECRETARY.

April 29, 1876. Annual meeting. The president, Dr. H. W. Williams in the chair. Ninety-two members present.

On motion of Dr. H. I. Bowditch it was voted that a committee should be appointed to nominate delegates to the meeting of the American Medical Association in Philadelphia. Drs. Bowditch, Sinclair, and Chadwick were appointed.

The Dissemination of Diphtheria at Funerals. — The committee appointed to investigate this topic reported as follows: —

The committee regret that the evidence presented to them, in investigating the matter referred to their consideration, has been so slight that they are unable to come to as positive conclusions as would be desirable; they feel bound, however, to present the following report.

Four hundred circulars have been sent to practitioners of this city and the immediate vicinity. Two hundred and thirty-nine answers have been received. Of these, one hundred and forty-three report a belief in the possible danger of contagion at the funerals of those who have died of diphtheria. Seventeen ndicate an opinion that there is danger from funerals in the houses of the deceased, but none in churches. Twenty-nine correspondents consider that physicians are not justified, in the present state of knowledge, in prohibiting public funerals.

A small number, eight, report instances where the transmission of the dis-

ease from a cadaver seems probable. Of these the most striking are the following.

The first case, reported by Dr. Salter, occurred in the autumn of 1860. The wife of a clergyman of Groton was visiting in New York with her child. While there the child died of what was called croup. The body was sent to Groton, and before the funeral the casket was placed in a hall of the father's house. Another child of this family and the child of a neighbor, Dr. Norman S. Smith, were in the hall and near the casket for some time. Whether the lid of the casket was open or not was not ascertained. Both these children were taken sick in nine days with what was at first called by Dr. Norman Smith "putrid sore throat," and they died with symptoms of strangulation as in croup, and with similar symptoms to those of the child who died in New York. There were white patches deposited on the fauces, and Dr. Smith finally considered it a disease new to him, diphtheria. After these cases several others occurred which were reported as similar, and there was great excitement in the town at the appearance of what was considered a new contagious disease. Eight or ten deaths occurred. The value of this evidence is materially injured by the fact that there is a conflict of testimony in regard to the existence of diphtheria in the town prior to this. One physician states that he had had three or four cases of diphtheria in the town of Groton and in a neighboring town in 1860 before the autumn. Dr. Smith says that his cases were the first "which occurred in New England." It being impossible to establish this point, and to decide whether there were not other sources of contagion than the corpse brought to the town, the evidence cannot be considered of great weight.

Dr. Abbot, of Wakefield, reports as follows: —

Mrs. H. died in 1874 at Wakefield, of diphtheria; her child (eight months old) died a few days afterward. A sister of the woman, living in a neighboring town, not having seen her during her sickness, came to the funeral, was taken sick in nine days, and died at her home in Bridgewater. A second relative, who also lived at a distance, in Lawrence, came to the funeral and was taken sick herself some three weeks afterwards with diphtheria, but recovered.

This testimony, again, is not positive: first, because the funeral took place at the *house* where the sickness had occurred; second, because there were other cases of diphtheria at the time in Wakefield, and there is possibility of contagion having been brought from some living source to the two visitors; third, there was at the time an epidemic of diphtheria in Lawrence. No death specified as diphtheria occurred at Bridgewater, according to the returns of the town clerk. It is therefore impossible to conclude that the source of infection was necessarily the cadaver.

Dr. J. Ayer reports the death of a child in Billerica Street, Boston, from diphtheria. The child had remained in the house for three weeks previous to death, except that he occasionally went with his mother to stores near by, and seven days before death went to the funeral of a child who had died of diphtheria. The funeral was at the house.

Dr. E. W. Cushing reports the death from diphtheria of a child in Milton. The child, who was fourteen months old, had been kept in the house, being con-

valescent from cholera infantum. The mother, eight days before the death of her child, attended the funeral of a neighbor's child. The drainage was found to be defective in the house where the second death occurred.

Dr. J. O. Green, of Lowell, and Dr. Jonathan Morse, of South Boston, recollect cases where an apparent dissemination of the disease (diphtheria) occurred at funerals of previous cases. They are unable, however, to give sufficiently full particulars.

An examination of the text-books, and of the French, German, English, and American journals of the last forty years, has given no evidence of the contagion of diphtheria from a corpse, or even a hint of the possibility of it, except in the case of an epidemic which occurred recently in England, and was mentioned in the *British Medical Journal*, February 5, 1876, as follows:

"The reports of medical officers are constantly bringing to light revelations of the extension of disease and death through individual or collective carelessness, in respect to isolation, which extensively prevails. . . . . Two instances reported on Monday last to the East Ashford rural sanitary authority are instanced by the *Kentish Express*. . . . . About five miles from East Ashford, the corpse of a person who died, in a neighboring town, of diphtheria, was brought to a village to be interred in the church-yard. As is usual in managing these ceremonies, a large assembly was collected at the funeral, and the result of this injudicious meeting was the broadcast diffusion of the specific disease in question." If the facts are correctly reported, there can be no doubt of the danger of such funerals; but as full particulars are not given, and the authority seems to have been a local newspaper, the committee cannot consider the testimony as very valuable.

The committee beg leave to present the following conclusions: —

(1.) As, of the two hundred and thirty-nine answers received, one hundred and forty-three report an opinion that there is a possible danger of contagion to children present at the funerals of those who have died of diphtheria, it is fair to infer that this opinion is tolerably current in the profession of this vicinity.

(2.) The evidence placed before the committee is insufficient to establish that diphtheria may be communicated from a corpse; the cases reported, however, are such as to suggest the possible danger of the dissemination of the disease in this manner.

(3.) Funerals at the houses of those who have died of diphtheria should be private, from the possible exposure to the poison of the disease; the danger of funerals at the church is likely to be less.

(Signed) H. I. Bowditch, R. H. Fitz, Charles P. Putnam, Frederick C. Shattuck, E. H. Bradford, Committee.

A Specimen of Diphtheritic Larynx was presented by Dr. G. W. Copeland. It was taken from a child three and a half years old, who had died of asphyxia after four days' illness. The membrane extended to the vocal cords.

A Membrane supposed to be Diphtheritic, from the air-passages of a woman twenty-nine years of age, was exhibited by Dr. D. W. Cheever. The markings of seven rings of the trachea could be counted on the membrane; below the last, the membrane appeared as a perfect cylinder. The woman, a patient

of Dr. Sinclair, was attacked with sore throat and loss of voice; a membrane was seen on the fourth day. The cervical glands were not enlarged. The distress on the fifth day was so great that Dr. Cheever had been called to open the trachea. Lime water was inhaled by means of the atomizer, and anodyne liniments were used, but the patient complained incessantly of a burning pain under the sternum until death ensued on the eighth day. The membrane presented had been expelled on the sixth day, with great immediate relief. The distress returned, however, after twenty-four hours, and death took place by slow asphyxia.

A Fibro-Cystic Tumor of the Breast was presented by DR. H. J. BIGELOW. The description was published in the JOURNAL of May 18, 1876.

An Ovarian Tumor was shown by DR. A. P. WEEKS; the account is reserved for publication.

DR. H. I. BOWDITCH inquired about the *facies ovariana* which was cited among the diagnostic points in the case.

DR. WEEKS described the peculiarities of the expression of countenance as given by Mr. Spencer Wells.

DR. J. R. CHADWICK questioned whether this point was of diagnostic value. He had observed it in all cases of abdominal enlargement when the distention was great. In a patient with ovarian tumor, whom he had tapped within a few days, the expression had been quite typical; but when allusion was made to it, the husband stated that he had always noticed this expression when the distention and suffering were great, but it invariably vanished the moment relief was experienced. Dr. Chadwick was satisfied that this sign was of no aid in the diagnosis.

A Case of Uncontrollable Vomiting in the third month of pregnancy was reported by DR. D. W. CHEEVER, in which the advisability of inducing abortion had been discussed. The woman miscarried at the end of the sixth month, when a hard mass was discovered below the stomach. The vomiting continued until the death of the woman, three weeks later. At the autopsy, malignant disease of the omentum and pylorus was discovered, which indicated the importance of thoroughly investigating the cause of vomiting in every case.

THE OPENING OF THE SCHOOLS.

THE present time is at once one of great importance to a large number of young men and of interest to the whole profession, for all physicians remember with pleasure the time of their studies, and never lose interest in those who are preparing to succeed them. It is not too much to say that there is a certain solemnity in the season at which so many take a step that is to influence the course of their lives, and which very frequently is a false one. Too much has been said about the dignity of the career and the noble privileges of relieving suffering and advancing knowledge that it offers. It is but right to impress upon the student the length and severity of the studies before him, the hard labor and slow progress that will at last lead him to a competency unless he be one of a thousand. Quite a sensation was made in London a year

ago when a distinguished gentleman took this ground at an opening lecture, assuring his hearers that unless they had a great love and aptitude for the profession, enough money to be at least for a long time independent of it, and a readiness to trust to another world for a return for vast labor in this one, they had better leave medicine alone.

This is sound doctrine, and should be preached nowhere more loudly than in this country. We know hardly a more melancholy spectacle than that of the young countryman who might have been a good farmer, who with little preliminary education enters a medical school, thinking, probably, that he will find in medicine a more profitable and — Heaven help him! — a more respectable calling. Almost certain disappointment and failure are in store for him. Our country physicians, in accordance with the law of the survival of the fittest, are really excellent practitioners, and if any one supposes that with little ability and a scanty education he can obtain a decent livelihood in the country, he makes a fatal mistake. This is discouraging, and is meant to be so, but we address it especially to those who choose medicine without a strong inclination for it. If they have this, it will carry them through their trials and lead to success in the end. There is another very different class of men to whom we recommend medicine. This class consists of young men of property, who, having gone through college, are at a loss what to do. These are not the men who make eminent practitioners, and we do not give this advice to them because they will help the profession, but because the profession will help them. The study will be an occupation that may preserve them from the evils of idleness, and they are indeed to be pitied if some one of the sciences connected with medicine should not awaken their interest. This will be a resource to them, and occasionally a man is found who is ready to devote his life to the study of some of these sciences, and his affluence will take the place of an endowment which our colleges cannot as yet bestow. It is far from our purpose to decry our profession. On the contrary, we believe that we are doing it good service by urging young men not to enter it rashly.

MEDICAL NOTES.

— The Harvard Medical School opened on September 28th. We understand that there is a prospect of a large class.

— We are happy to learn that Dr. Woodbury, who was struck by an insane patient at the McLean Asylum, is doing well. The occurrence forms an interesting commentary on the remarks of the *Lancet* on American asylums.

— Periodic movements in the foliage of the *Abies Nordmanniana* are described in *The Popular Science Monthly*. This coniferous tree, now widely diffused on account of the elegant coloration of its leaves, appears to bear uniformly whitish foliage, when observed in the morning or towards evening; but when observed in the middle of the day the green tint seems general. The reason of this difference is found in the fact that the position of the leaves on the branch is different in the daytime from that at night; in the former case the leaves are spread out upon the branch and present their upper surface,

producing the greenish aspect of the foliage; during the latter period, on the contrary, it is the lower or whitish surface that is presented to the observer. Thus there is a diurnal and a nocturnal position. As the day declines, the leaves, which at noon were horizontal, are seen gradually to erect themselves upon the branch, often becoming nearly perpendicular to it, and this movement of erection is accompanied by a movement of torsion in the basal part of the leaf, which often traverses an arc of 90°.

BOSTON CITY HOSPITAL.

MEDICAL CASE OF DRS. R. T. EDES AND O. W. DOE.

REPORTED BY J. CHESTER LYMAN.

Intra-Pericardial Aneurism. — Mary C., aged twenty, and born in England, entered the City Hospital on the 11th of last May. She was then convalescent from acute rheumatism, and gave a history of numerous previous attacks extending over a period of seven years, and said to have been complicated with cardiac disease. Since the first of these attacks she had suffered greatly from severe palpitation, which at times caused syncope. This symptom and præcordial pain were sufficient to necessitate lying upon the right side.

On physical examination of the heart, distinct systolic and diastolic murmurs were heard half-way between the nipple and the sternum, and they were propagated three inches to the left. A loud, rough, aortic systolic murmur was audible with each sound at the left edge of the sternum, accompanied by a distinct click, also a faint thrill over the base of the heart and over the vessels of the neck. The area of cardiac dullness was somewhat increased. Pulse 92, and regular. Temperature 97.8°. Pulmonic sounds normal throughout.

For the following ten days there was great variability of the heart's action, it being at times regular, and again very irregular and intermittent. Then, as the irregularity was more persistent, digitalis was given three times a day, at first one grain of the powdered drug, and later fifteen minims of the tincture. On the 18th bromide of potassium was prescribed, ten grains morning and night; also the tartrate of iron and potash, ten grains three times a day.

June 1st. Medicines previously given were omitted, and the following was ordered: —

℞ Digitaline . . . . . gr. i.
Ferri redacti . . . . . gr. xxxii. M.
Ft. pil. No. xxxii. Sig. One pill three times a day.

Two days later the patient complained of præcordial pain, and the sulphate of morphia was ordered, one eighth of a grain *pro re natâ*.

June 5th. Action of heart was irregular, every fourth beat being omitted. A very loud, rough sound was heard with systole in the neighborhood of the left edge of the sternum. The next day the pills of digitalis and iron were omitted.

June 12th. Countenance was noticed to be livid at time of morning visit, and the patient complained of having had a chill. On the 14th this recurred, and for two days following ten grains of quinine were ordered to be taken at

bedtime. During the next five days, however, the chills were felt, but were not as severe as at first.

About this time the patient began to be troubled with night sweats, which were relieved by one sixtieth of a grain of the sulphate of atropia.

Service of Dr. Doe. July 3d.

℞ Pulv. digitalis . . . . . gr. ss.
Pulv. colchici . . . . . gr. i.
Sodæ bicarb. . . . . gr. iss. M.
Sig. To be taken three times a day.

The above prescription was ordered, together with the daily local application of the ethereal tincture of iodine over the heart.

July 8th. Patient was ordered the citrate of iron and quinine, five grains three times a day.

There was discovered, moreover, two inches to the right of the centre of the sternum, and between the second and third ribs, a very loud systolic murmur of a scraping character. On palpation a strong impulse was imparted to the finger as from a tumor as large as an English walnut. The patient also described a thrill which she said she had felt for a week. In view of these facts the diagnosis of a small aneurism of the ascending aorta was made.

July 11th. Patient complained of pain over the point just referred to, and an application of the tincture of iodine was ordered. With the exception of this pain her condition was the same as it had been for several days, though she appeared to be gradually losing strength. There was no orthopnœa or gastric disturbance; respiration was rapid, but not severely labored; the extremities were not noticeably cold, and there was nothing to indicate a speedy death. In the afternoon, however, the patient complained of nausea, and asked for a drink of water, but before it could be brought she had a slight convulsion, fell back upon the bed on which she was sitting, and, gasping a few times, died.

During her stay in the hospital the pulse ranged from 62 to 112 beats per minute, though most of the time it was between 80 and 100. Her temperature was very variable, a change of from five to seven and a half degrees in twelve hours being quite frequent. Its highest point was 104.8°, on the evening of June 4th, and its lowest 96.6°, twenty-four hours later.

At the autopsy, made by Dr. W. P. Bolles, twenty-four hours after death, the following condition was discovered. Upon opening the thorax the most noticeable object was the greatly distended pericardium. It had displaced the lungs sufficiently to lie in contact with the chest-wall, and occupied the middle third of the chest, from the sterno-clavicular articulations to the seventh sterno-costal articulation on the left and the fifth on the right, extending six inches vertically, and from two inches on the right to three inches on the left from the median line.

The wall of this tumor was very tense, and *ballottement* of the heart, like that of a *fœtus in utero*, was readily obtained. On opening the pericardium thirty fluid ounces of liquid, chiefly extravasated blood, were withdrawn. Its serous surface showed signs of extensive recent inflammation.

An inch and a half from the heart there was an aneurism of the aorta, about half an inch in diameter, and projecting toward the right side. As the parts

lay, *in situ*, the aneurism was almost directly beneath the point where the peculiar impulse was felt on the 8th of July. From this aneurism hæmorrhage had taken place into the pericardial cavity through an opening which was with difficulty found, and was in reality no larger than a pin-hole. The aortic valves were thickened so as neither to open nor close perfectly, and the mitral orifice was so contracted as to admit only two fingers. The heart was dilated, pale, and flabby; the kidneys were large, soft, and fatty. No other viscera were found abnormal.

THE ELEVENTH GENERAL MEETING OF THE AMERICAN SOCIAL SCIENCE ASSOCIATION, AT SARATOGA, SEPTEMBER 5–8, 1876.

MESSRS. EDITORS, — The general meeting lately closed was in certain respects more successful than any that preceded it. The audiences, of which there were sometimes several at once, occupying different halls, were large; and the interest in the forty-five papers and addresses, presented in the various branches, remained unabated to the close.

As usual, the larger share of the matters discussed was such as may be classed under the head of political economy, in a broad sense. The opening address on Tuesday evening, September 5th, was delivered by the president of the association, Hon. David A. Wells, and contained an admirable summary of the causes leading to the present depressed state of business. These causes he summed up under the general fact that immense waste and loss of actual values has been occurring throughout Christendom for a series of years past, and that of the results of this loss and waste we necessarily receive our proportion in America, by a law of distribution of effects. The Silver Question, Municipal Debts, Production and Destruction of Wealth, Industrial Condition of the Southern States, Commercial Crisis of 1819, Railroad Question in America, Civil Service Question, Socialism in America, Township Organization in the New States, Elective Judiciary, and other leading questions were also discussed in the general or main sessions; while the departments of jurisprudence and of health confined themselves to a narrower range of topics.

In the department of jurisprudence the debates were of great interest. Six law schools were represented by the presence of members of their faculties, as follows: Professors Hoadley, of the Cincinnati school; Wells, of the school of Iowa University; Hitchcock, of the Washington College Law School, St. Louis; Dwight, of the Columbia Law School, New York; Wayland, of Yale College Law School; and W. G. Hammond, of Iowa University Law School. The gentleman last named has accepted the position of secretary of the department, and agrees to correspond with each of the thirty-nine law schools in the States, in order that all of them may if possible be represented in the future annual sessions of the department. Legal education was naturally the chief subject of discussion, and great benefit may be expected to result from the continuance of the debate in coming years.

The department of health sat for seven hours on Friday, the 8th, listening to the following papers: Report on Health of Schools, by D. F. Lin-

coln, M. D., secretary; Near-Sight in Schools, by Jas. A. Spalding, M. D., of Portland, Me.; a portion of the statistical results of Dr. E. G. Loring's paper on Near-Sight, read at the International Congress; Defects of Hearing in Schools, by C. J. Blake, M. D., of Boston; two papers on the Half-Time System in Schools by Prof. J. M. Gregory, of Illinois Industrial College, and T. Newell, M. D., of Providence, R. I.; and one by R. J. O'Sullivan, M. D., of New York, on Local Defects in School Hygiene. These were all rather short papers; the longer ones were one on Sanitary Requirements in School Architecture, by the secretary, Dr. Lincoln, and one on Alcohol as an Article of Diet, by Prof. R. T. Edes, M. D., of the Harvard Medical School, both comprehensive, and giving in a summary way the latest conclusions of science in their respective subjects.

The paper by Dr. Spalding represents that two thousand three hundred and seventy-two primary and grammar school children in Portland were examined by test-types, only a few being subjected to the ophthalmoscope; the results show a prevalence of short sight ($\frac{1}{36}$ and over) equaling three and a half per cent. among the primary scholars and eleven per cent. among grammar scholars.

Dr. Loring (assisted by Dr. Richard Derby) examined about eleven hundred and thirty-three scholars from the ages of six to eighteen years and upwards in New York public schools, the ophthalmoscope being used in all cases, and each eye tested separately (at $\frac{1}{60}$). He found a proportion of near-sight among the primary scholars, of 6.8 per cent.; among grammar scholars, of 11.67 per cent.; and in the normal school, of 26.67 per cent. Hyperopia was represented in the corresponding ages by 8.3, 20.53, and 11.04 per cent. respectively. German children were found to present 23.23 per cent., Americans 19.35, Irish 14.22, and all other nations together 15.41 per cent. of near-sight.

Dr. Blake urged strenuously the propriety of having all children's hearing tested by their teachers at the beginning of each school year. He stated that out of eight thousand seven hundred and fifteen cases of ear disease, accompanied by impairment of hearing, in dispensary practice, two thousand one hundred and seventy-five, or one quarter, were children under fourteen years.

The conclusions of Dr. Edes were as follows: —

I. Under some circumstances alcohol may be a food. These are: —

(*a.*) Deprivation of nourishing and sufficiently varied and abundant rations, as in the case of soldiers, sailors, laborers, etc.

(*b.*) When for any reason ordinary food is not well assimilated, or the system has become habituated to alcohol, as in some rare instances of habitual topers and in some wasting diseases.

This substitution should be a matter of necessity and not of choice.

II. The healthy man, with a full and varied supply of food, needs absolutely no alcohol. Wine with food sometimes assists digestion. but the digestion which needs the aid is either enfeebled or overburdened. The most severe and long-continued labor can be carried on better without alcohol than with it. This is, in most cases, especially true of mental labor.

III. In the few cases in which this is not true, and where a small quantity

of alcohol suffices merely to restore the normal vigor without excitement, the previous condition is probably one of somewhat impaired vitality, perhaps more especially affecting the heart. As an addition to a diet already sufficient, alcohol is, to say the least, useless in perfect health.

IV. An occasional use of light wine or beer is a luxury and not a necessity. Experience shows that such a use cannot be regarded as seriously detrimental either to bodily or to mental vigor.

V. After a fatiguing day's work, as a relaxation and agreeable change, or as a prelude and assistance to the digestion of more appropriate food, alcohol may be looked upon as approaching more nearly to a true stimulant or restorative action than under any other circumstances in health. We then expect from it neither intoxication nor reaction.

VI. An habitual over-dose of alcohol leads to degeneration of important organs and undermines the vital powers.

VII. There may be moral reasons for total abstinence entirely distinct from the physiological.

VIII. The introduction of the use of light wine and beer, though not desirable in a community already in a state of ideal physical and moral perfection, is highly desirable as a substitute for the use of stronger liquors.

I will mention in conclusion the sessions of the Conference of the State Boards of Public Charities, which have now been held for several years in connection with the Social Science meetings, although independent of the latter in organization. They were opened on Tuesday with an address by Governor Tilden, of New York, and on the following days the topics of Penal and Prison Discipline, Medical Charities and Out-Door Relief, The Treatment of Insanity, The Protection of Immigrants and the Prevention of Pauperism, with others of more or less medical interest were ably discussed.

The place of meeting for next year is not yet determined, but Newport and Cincinnati are among the places named. The time will probably be about the same.

D. F. L.

LETTER FROM PORTLAND.

EXPOSURE OF A SPIRITUALIST BY PHYSICIANS.

MESSRS. EDITORS, — On the 26th of August an Associated Press dispatch announced to the country that a spiritualistic fraud of the Katy King stamp had been exposed in Portland. As the whole subject of this phase of superstition has a medical bearing on account of the part it frequently plays in the production of mental disease, and especially as the gentlemen who effected the exposure are members of our profession, I have thought that an account of the affair would be interesting to your readers. The data have been derived from an original source, and their accuracy may consequently be relied upon.

For about a year and a half past a Mrs. Hull, who lives in Portland, has had great celebrity as a "materializing medium," that is, a person in whose presence the disembodied spirits of deceased mortals can, under certain conditions, assume the shape and appearance of their perished bodies. The possession of so extraordinary a power naturally made her an object of interest, and

she was greatly besought to display her talent to the outside world. But being of a very retiring disposition, she shunned the fame which had marked her for its own, and rarely gave audience to any but friends of the family and those whom they, by special permission, were allowed to introduce. She had an aversion also to taking money from her visitors, but of late was rapidly overcoming this reluctance, and it came to be understood that ten dollars a *séance* was expected.

The method of proceeding was very like that generally employed on similar occasions, but had less appearance of dishonesty. A triangular space was curtained off in one corner of a large parlor, of which the floor and walls were evidently free from deluding apparatus. The medium sat on a low stool in one angle of this space, and, to quiet skepticism, she allowed a portion of her skirt to project beneath the curtain, in which position it invariably remained unmoved throughout the performance. The light was turned almost out, the spectators arranged themselves in a line before the curtain, and the medium went into a trance. As usual, an Indian spirit superintended the show, and communicated with the audience sometimes by raps, at others through the vocal organs of the unconscious Mrs. Hull. In about twenty minutes ghostly figures would appear at the central slit in the curtain. These were usually female forms, clothed in long, flowing, white robes, and generally veiled. Very rarely a male would appear, and once in a while a little child. Figures often came out several feet into the room, touched some of the spectators, allowed themselves to be fondled and kissed, brought flowers, and did other things indicative of intelligence and affection. Sometimes the spirit would hold the curtain a little aside and display the medium upon her cricket. Some of the audience could usually recognize the spirits as their departed friends. Now all these things were very startling to the average beholder, being quite unlike any ordinary tricks of jugglery; and, accompanied as they were by copious explanations of the spiritualistic kind, they made a very decided impression upon the credulous people whom alone Mrs. Hull desired to have enter her haunted premises. But in September, 1875, Dr. Gerrish was present at one of the sittings, and failed to see the necessity of appealing to supernatural agencies to account for the phenomena observed. Being an invited guest, courtesy restrained his desire to investigate as he would have done at a mercenary exhibition; and, having been so indiscreet as to express his incredulity, he was for a long time unable to regain admission. On the 4th of August, 1876, however, a friend's entreaties obtained an invitation for him and Dr. Greene, and they at once began their investigations. Profiting by the experience of the past, they allowed not a whisper of doubt to escape from their lips. Whatever appeared was greeted with ecstatic delight and open-mouthed amazement. The medium had never had more liberal, enthusiastic, and gullible admirers than they, and the materializations which they viewed were considered extraordinary even by old *habitués* of the house. On the 10th they were accompanied by Dr. George P. Bradley, of the United States Navy, and on the 18th Dr. Augustus S. Thayer was present. Had these four gentlemen previously demonstrated the existence of the spirits of dead men, or had they even entertained the strongest belief in the possibility of spirit materialization, they could not have

ignored the palpable evidences of fraud in which all these performances abounded. For instance, the dress of the medium, which was trim and neat about the upper part, bulged in a most unfashionable and suspicious way below the waist, leaving room for a whole magazine of clothes beneath. Just after the beginning and before the close of the *séance* there was rustling behind the curtain quite as prolonged as would be necessary for effecting a careful change of raiment. An "Italian dancing girl's" spirit displayed feet and ankles which were clad as it was observed that Mrs. Hull's were before the sitting. Female figures only showed the full form, giving rise to the thought that the male bifurcated garment was difficult for spectres to manage. The spirit of a person formerly well known to all present was so ridiculously unlike him that the liveliest imagination could see no resemblance. A ghost sought recognition from her old surgeon by displaying a hand from which a finger was missing; but the amputation on the goblin did not correspond with that on her earthly prototype. This spook smiled at the request of a wretched skeptic who thought the face might be masked. Immediately after, there was a sound behind the curtain which was unmistakably due to the replacement of an upper set of false teeth, leading an unbeliever to surmise that the smile of accommodation had in darkness been broadened into such a grin of satisfaction at the supposed credulity of her audience as to dislocate the artificial molars. A sweet sprite, who was recognized as his daughter and kissed by a gentleman (who was invited in to contribute to the effect and to inspire confidence by his presence), had black instead of light-brown hair, such as grew on her mortal head. A spirit which was said to be that of a Spaniard did not understand when addressed in her native tongue, but comprehended English perfectly. The raps never were heard when a ghost was in sight, the opening in the curtain being some feet from the wall. The superintendent Indian claimed to be of the Penobscot tribe, and only a few years out of the flesh; and yet she jabbered a lingo which has been obsolete for a half century — except among the aborigines of the dime novel. But far more conclusive than all these circumstances was the distinct recognition of the peculiar features of Mrs. Hull in several of the faces which were seen.

The investigators permitted the performances to continue so long simply because they desired to see to what extent the woman's unbridled audacity would display itself. Soon wearying of the show, which was not as clever as it at first seemed, they laid their plans for the exposure of the trickery; and on the evening of the 22d of August the *dénouement* took place in the presence of a select company of invited guests. Each of the unbelievers had his part assigned, and no contingency could have arisen which was unprovided for. All were provided with inextinguishable fusees, and held them ready to strike if the light should be put out by Mr. Hull, who always sat by the lamp. If the medium should attempt one of her feats, her escape from exposure was impossible. After waiting the usual time there appeared a female draped in white and thickly veiled. It was a figure which had repeatedly come to commune with Dr. Greene, and had promised to materialize at this time. At his request, couched in winning terms, she placed her hand in his, and was at once, in spite of vigorous resistance, drawn out into the room, unveiled, and found to be Mrs.

Hull herself. While this was going on, Dr. Gerrish had drawn the curtain aside and discovered the unoccupied stool, the empty skirt, and a little pile o female wearing apparel. It was exactly what was expected. The game of the impostor had been a bold one, but therein lay its greatest protection. So few safeguards against detection were employed that almost everybody thought that the medium must be honest, and no little indignation was excited among people otherwise very sensible at the suggestion of the possibility of deception on the part of so ingenuous and high-toned a woman. Science, however, counts character for nothing; and when men accustomed to the rigid methods of practical medical investigation were admitted to the *séances*, then was the beginning of the end.

Of course the medium was deeply moved; but she had the assurance to send after the doctors, declaring her innocence on all previous occasions, insisting on the reality of materialization, and begging them to let her "sit" for them again under any test conditions they chose to impose. Although they saw at once that this was simply an effort to gain time in the desperate hope that something might happen to avert the ruin which threatened her, they agreed to give her a chance, but when the appointed time arrived she had not the courage to face them. Aside from the fact of her actual detection, the evidences which these physicians had accumulated are quite sufficient to convince any reasonable man of her guilt; but there are some spiritualists who profess to believe her preposterous story, and on this account it is to be regretted that the spook-hunters did not carefully examine all the clothing which was seen in the cabinet, and show it to be, what no one in his senses doubts it was, the paraphernalia for impersonating the various characters in her repertory. But the exposure was so complete already that it was not for a moment supposed that the medium would have the audacity to deny that she was as guilty in all previous exhibitions as in this; and consideration for the feelings of so humiliated a woman led all present to pursue a course to which every one with the instincts of a gentleman would be prompted, but of which she could, of course, have no appreciation.

We have recounted these incidents at some length partly because of their inherent interest, partly that our professional brethren may profit by the experience of the Portland doctors, who have succeeded in bringing to nought one of the most atrocious attempts at fraud which has been made for a very long time. The mischief of the business is by no means principally in swindling people out of their money, but in working on the tenderest sensibilities of human nature and trifling with the deepest emotions of which man is capable. Far less than this drove Robert Dale Owen to a mad-house, for Katy King was to him simply a wonderful phenomenon. But the people who have been duped by this wicked imposture have believed that they held converse with their nearest and dearest who were dead. To them materialization was a blessed reality, and some of them have been so wrapped up in the thought of it that their friends have entertained great fears for their sanity. It is fortunate that the inhuman cheat has been thoroughly unearthed so soon, but it is as yet by no means certain that some of its results may not figure in the records of our insane asylums.

GAMMA.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 23, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	487	23.86	29.35
Philadelphia	825,594	316	19.90	22.24
Brooklyn .	506,233	212	21.77	24.92
Chicago . .	420,000	185	22.90	19.75
Boston . .	352,758	175	25.79	26.20
Providence	101,500	30	15.37	19.02
Worcester .	51,087	25	25.45	20.91
Lowell . .	51,639	38	38.26	20.55
Cambridge	49,670	19	19.89	23.31
Fall River	50,372	17	17.58	23.99
Lawrence .	36,240	7	10.04	25.96
Lynn . .	33,548	20	31.00	19.23
Springfield	32,000	6	9.75	20.93
Salem . .	26,344	11	21.71	22.92

Normal Death-Rate, 17 per 1000.

LETTER FROM DR. WOODWARD.

MESSRS. EDITORS, — I am quite sure your correspondent, in his account of the meeting of the International Medical Congress, had no intention of misrepresenting my paper on typho-malarial fever, but in his report of it (JOURNAL, September 14th, pages 330, 331) he has so completely misconstrued my statements on many important points that I must beg you toinsert in your pages this brief note, the object of which is to disavow all responsibility on my part for the account he has given. Passing by several verbal inaccuracies, and the strange statement that I see "in periodicity an additional reason for the great mortality in our army," I note, in a general way, that he has confused my remarks on uncomplicated typhoid fever and malarial fevers with what I said of the compound or hybrid forms.

Very respectfully, your obedient servant, J. J. WOODWARD,

WASHINGTON, D. C., *September* 23, 1876. *Surgeon U. S. Army.*

MESSRS. EDITORS, — Having without solicitation on my part become possessed of the knowledge of the "*secret remedies*" employed by the late Dr. Lombard, the famous "*cancer doctor*" of this region, I feel it my privilege, as a member of a scientific profession that has only for its object the advancement of knowledge and the relief of suffering, to make a simple statement of the remedies and methods which were employed in the so-called "*treatment of cancer.*"

The remedy employed, if the "cancer" was small, was simply the inspissated juice of the leaves of the *Phytolacca decandra* (garget), which was applied in the form of a plaster until sloughing took place. The after-treatment was some simple dressing like simple cerate. If the tumor had attained considerable size, Dr. Lombard first used a paste composed of chloride of zinc and pulverized sanguinaria until an eschar was produced, and then the same plaster as before was applied until the mass sloughed away.

The knowledge of these remedies was given me by Dr. Lombard himself, while I was attending him during his last illness, and a few days before his death.

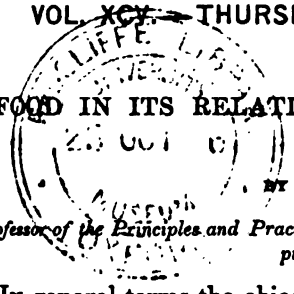
CUMBERLAND MILLS, MAINE. J. L. HORR, M. D.

ERRATA. — In the paper by Prof. Harrison Allen, published September 21st, on page 339, in the fifth line from the foot, for "is" read "lies." On the last line of the same page for "latter" read "former," and on the first line of the next page for "former" read "latter."

In the first line of Dr. Holmes's letter, in our last number, for "wrong" read "worry."

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FOOD IN ITS RELATIONS TO PERSONAL AND PUBLIC HEALTH.[1]

BY AUSTIN FLINT, M. D.,

Professor of the Principles and Practice of Medicine and Clinical Medicine at Bellevue Hospital Medical College.

In general terms the objects of my discourse will be to indicate the claims of my subject upon the interest of not only medical men but the public; to do justice to Nature, or more correctly Providence, as regards the instinctive provisions for alimentation, and to point out certain popular errors in relation to diet affecting injuriously personal and public health. I do not propose to treat of the subject in any of those aspects which may be distinguished as scientific; but the positions which I shall take, while they are in harmony with the facts of science, will have their basis in reason, experience, and common sense.

The necessity of food is, of course, recognized as a fixed fact. Every one knows that we must eat to live. To the statement of this fact is often added another statement, namely, we do not live to eat. Now I claim that we are not to eat merely to live. Alimentation has ends beyond simple existence. We must eat to secure the complete development and growth of all parts of the organism. Thereon depend the maturity and perfecting of all the functions, mental as well as vital. Eating is indispensable for attaining to the capabilities of body and mind. It is equally indispensable for maintaining these capabilities. In other words, health in its broadest sense, psychical as well as physical, is dependent on food. . . . .

The instinctive provisions for alimentation are inherent in hunger, appetite, and taste. These physiological faculties have obviously alimentation as their final cause. In the inferior animals they suffice for the requirements of nutrition. In man, reason is brought to bear upon these as upon other requirements of the body; hence arises a capital distinction between man and inferior animals, namely, in the preparation of food. It may certainly be assumed that Providence has not instituted hunger, appetite, and taste in order to have them repressed

[1] Abstract of a paper read before the American Public Health Association.

or antagonized. Normal instincts having obvious reference to the needs and welfare of the organism are entitled to precedence over human judgment. They are guides to be followed, reason and experience providing certain regulations for their exercise but never contravening them. Let us make a practical application of these truisms. Hunger, as we know, in an extreme degree absorbs every sentiment and enchains the will. Existing for a certain time, the morbid state which it denotes ends in death. If after prolonged abstinence the means of satisfying hunger be obtained, the craving for food cannot be at once fully gratified without risk. Here is an example of the regulation of this instinct by experience. Appetite and hunger are different degrees of the same instinctive sense, but there is this difference between them: the one is physiological, the other pathological. The sense of hunger denotes an abnormal condition, whereas appetite is a normal expression of the need of alimentation. In addition to this significance appetite has another, namely, the quantity of aliment needed. The requirements of health are that the desire for food be heeded without delay, and fully satisfied. Do popular notions correspond to these requirements of health? In my young days it was often enjoined as a capital maxim in dietetics, that one should always rise from table with a good appetite. We do not now hear this maxim so often quoted, but not a few still in a measure act upon it. Persons sometimes express, with a feeling akin to remorse, regret that they have not resolution enough to put the idea into practice. Another idea, quite as prominent now as then, is that food should never be taken except at certain times, no matter how great may be the desire for it. Exact regularity of meals, and an amount of food more or less under that indicated by the instinctive want of it, have been and are considered good sanitary rules. They probably grew in part from a medical doctrine now obsolete, that most diseases arise from overeating. This doctrine had its fullest development in Abernethy's day, when the practice of medicine consisted largely in the administration of blue pills followed by "black draught." . . . . Other than sanitary considerations have been and are still involved in the popular notions of which I am speaking. Not a few of those engaged in intellectual pursuits have been led to believe that a full diet tends to impair the faculties of the mind, and to debase the finer sentiments of our nature. . . .

Physiology, experience, and common sense are alike opposed to these popular notions. The conditions for perfect health are *first*, a sufficient appetite; *second*, the gratification of normal appetite before the want of food reaches the abnormal degree expressed by hunger; *third*, the satisfaction of appetite by an adequate quantity of food. These conditions are fulfilled by compliance with the instinctive provisions for alimentation. But it will be asked, is appetite infallible as a guide in dietetics? Following it as a guide, is food never taken beyond the requirements of

health? I answer, it is a reliable guide under normal circumstances. The inevitable circumstances of life are often not altogether normal, although producing no distinct morbid affection. If appetite be not infallible, it is at all events more reliable than rules based on theoretical ideas, popular notions, or on purely physiological data. Moreover, it was evidently not intended that the quantity of food should be accurately adjusted to the needs of the economy. To do this is impossible, and therefore it is necessary to elect between the risk of taking either more or less food than enough. Which is to be preferred? Undoubtedly it is vastly better to incur the risk of taking too much than too little. Nature provides for a redundancy, but there is no provision against a persistent deficiency. *Ex nihilo nihil fit.*

As in appetite we have a guide in respect to the times of taking food and the quantity to be taken, so taste is a guide in respect to the kinds of food required. Not only has the physiological purpose of gustation been ignored, but there are many at this day who still look on the enjoyment of gustation as at least bordering on sensuality and sin. Hence coarse food and poor cooking have been thought to be conducive to health. . . . . The simple rule is not to allow temptations incident to taste to lead beyond the satisfaction of a normal appetite. . . . .

It is an error to suppose that one can judge with accuracy, from personal sensations, of the effect of different articles of food. Experience thus obtained is often fallacious. The functions of digestion are liable to be disturbed by many causes, intrinsic and extrinsic, irrespective of diet; the disturbances, however, are often erroneously attributed to particular articles which happened to have been eaten. Nothing is more common than to hear persons say that milk and eggs never agree with *them*. These are the two types of a complete aliment, combining all the alimentary principles required for nutrition. It is safe to say that the notion that there are some healthy stomachs which cannot digest these articles of food, if not purely a theoretical notion or a whim, is derived from fallacious experience. An exaggeration of individual idiosyncrasies is a common error. The idea of innate peculiarities of the physical constitution is a not uncommon form of egotism. There is something congenial to self-love in the thought that one is not altogether constituted like other people; it is a congenital mark of distinction.

Another error is the supposition that the functional ability of the digestive organs is maintained in proportion as they have little work to do. Physiology and experience teach otherwise. It is a law of the living organism that deficiency of functional exercise impairs function, and that prolonged suspension of function leads to organic changes which destroy functional capacity. . . . .

Mr. Chairman, my subject, as I stated at the outset, is a large one;

it touches the sources of public health. It touches the question of either the progress of our people in mental and physical vigor, or, on the other hand, degeneracy of mind and body. I cannot follow it into these relations, but the importance derived therefrom has, I trust, been rendered somewhat apparent by the views which I have presented in this discourse.

CHANGE IN THE NUMERATION OF SPECTACLE LENSES; ADOPTION OF THE METRICAL SYSTEM.

BY HASKET DERBY, M. D.

WITHIN the past year the inch has been discarded and the metre adopted as the unit in the numeration of glasses and the expression of degrees of refraction and breadth of accommodation. I desire briefly to state the reasons that have led to this change, and to explain the new method.

A one-inch lens, the unit of the system so long in use, was a lens that brought parallel rays to a focus one inch behind itself. Held one inch from the wall of a room it would form thereon the perfect picture of a window at the opposite end of the same chamber. The radius of its curvature was substantially its focal distance — one inch.

This lens had, however, no real existence for the surgeon. Too strong for practical purposes, it was found in no spectacle case. The most powerful convex glass, used for the near in cases where the crystalline had been removed, was one that had a focal distance of two inches and was consequently half as strong as the unit, having to be expressed by the fraction $\frac{1}{2}$. The next in order was $\frac{1}{3}$, and so on through the series. Moreover, to obtain for cataract patients intermediate lenses, these fractions themselves were subdivided, and we thus had $\frac{1}{2\frac{1}{2}}$, $\frac{1}{2\frac{1}{4}}$, $\frac{1}{2\frac{1}{8}}$, etc. The series ran up to $\frac{1}{72}$, giving thirty-two glasses, all expressed in vulgar fractions, the differences between which necessitated constant calculation. These very intervals were, moreover, unequal, varying as they did from $\frac{1}{360}$ to $\frac{1}{18}$.

But a not less serious objection to this method lay in the fact that the standard itself was variable, and that to ascertain the strength of a given number, especially a high one, it was necessary to find out in what country it was ground. The Paris inch differed from the English, 36.94 of the former, 39.37 of the latter going to a metre. Between these came the Rhenish and the Austrian inches, all differing from each other. A patient asking for No. 2 in London, Paris, Berlin, or Vienna might receive a different glass in each place.

At the meeting of the Heidelberg Society in the autumn of 1875, and shortly afterwards at the Medical Congress in Brussels, Professor

Donders proposed the metre as the unit of numeration. The metrical system had already been adopted for other purposes in many countries, and was likely to be used for the expression of the focal distances of optical instruments in all, excepting perhaps England.

The new No. 1, therefore, is a lens ground on a curve whose radius is one metre, and having a focal distance of one metre, corresponding very nearly to $\frac{1}{36}$ of the former (French) series. This glass is called a "dioptric." No. 2 is equivalent to two dioptrics, is consequently twice as strong as one dioptric, has its focal distance in half a metre, and corresponds nearly to $\frac{1}{18}$. No. 3 has its focal distance in one third, No. 10 in one tenth, No. 20 in one twentieth of a metre, and consist respectively of three, ten, and twenty dioptrics, being precisely that number of times stronger than No. 1.

Such is the simplicity of the whole system. To obtain glasses feebler than No. 1 we divide the dioptric expressing its divisions by decimals, 0.25, 0.50, and 0.75. These fractions may moreover be used between the weak numbers of the series, up to 6. But there are no vulgar fractions, and pencil and paper are never necessary for our calculations. Two No. 2's make one No. 4; 1.50 and 3.50 make 5; the difference between 2.50 and 2.25 is 0.25, or quarter of a dioptric. The new trial cases of lenses contain thirty numbers, the difference between each of which may be calculated instantly. In using the new system we speak of a myopia or hypermetropia of so many dioptrics (expressed by the letter D). Presbyopia is estimated by the number of dioptrics necessary to bring back the near-point to 22 centimetres (about 8 inches), and the width of accommodation is the number of dioptrics embraced in the lens equivalent to the increased convexity of the crystalline, when changed in adaptation from its far to its near point. Thus, to cite the example given by Donders, let the near point be in one fifth of a metre, and the far point in a metre, the accommodation (A) $= 5 - 1$, equals 4 dioptrics.

But one or two points remain to be considered. The numbers of the new glasses do not express their focal distances. These may, however, readily be found by dividing a metre by the number of the glass. No. 4 has a focal distance of $\frac{1}{4}$ m. or 25 cm; No. 10 of $\frac{1}{10}$ m. or 10 cm.

The reduction of these glasses to the old system, and the change from the old to these, is equally simple. Our previous glasses are numbered in Paris inches, 36 of which may for convenience in calculating be taken to represent a metre. Divide the new number by 36 and we practically obtain the old: 2 D equals $\frac{2}{36} = \frac{1}{18}$; 3 D $= \frac{3}{36} = \frac{1}{12}$; 9 D $= \frac{9}{36} = \frac{1}{4}$. To change the old to the new, multiply by 36: $\frac{1}{4}$ becomes $\frac{36}{4} = 9$ D; $\frac{1}{8}$ becomes $\frac{36}{9}$ or 4 D; $\frac{1}{15}$ becomes $\frac{36}{15}$ or 2.50 D.

At my suggestion Nachet has added to his new cases of metrical test lenses a printed table giving their respective values in terms of the

previous system. This will facilitate the change for those of us long used to the old numbers.

This system of Professor Donders has been adopted by the most eminent ophthalmologists. Snellen, Giraud-Teulon, Nagel, Javal, Wecker, and Carter at once gave in their adhesion to it, and its use is daily spreading. And in our own country the surgeons of the Boston Eye Infirmary voted, at a recent meeting, "that all future measures of length and refraction be recorded in, and all glasses ordered on the metrical system.[1]

A CASE OF POISONING BY BROMIDE OF CADMIUM.

BY GEORGE A. WHEELER, M. D., CASTINE, MAINE.

As this is the first case, so far as I am aware, of poisoning by the use of the bromide of cadmium, I am induced to make it public. The history of the case is as follows.

A patient of mine, Mrs. N., residing in this town, has been in the habit of taking, by my direction, occasional doses of bromide of ammonium. On Friday, September 8th, feeling some premonitory symptoms of neuralgia, and having none of her usual medicine by her, she sent to the druggist in this town for one ounce of the bromide of ammonium. The druggist sent her an ounce bottle labeled bromure d'ammonium. It resembled, as seen in the bottle, the veritable salt which it purported to be. Upon receiving it she took out upon the handle of a teaspoon the same quantity, as nearly as she could judge, that I had been in the habit of giving her, poured it into a tumbler two thirds full of water, gave her mother, Mrs. R., half of it, on account of a headache, and swallowed the rest herself. She at once perceived the difference in the taste of it, and without waiting to perceive any further effects sent her servant to me with the bottle, with a request that I should tell her what it was and whether she should take any more. Upon looking at the bottle and reading the label I supposed that it was all correct, and that she had sent to me as a matter of caution on her part. To make sure of it, however, I wet my finger and took out of the bottle what would adhere to it and put my finger in my mouth. I noticed at once the extremely pungent taste, and felt sure that it was a corrosive poison of some kind. I immediately made my preparations to go to the patient's house and see in what condition she might be. Before I left my own premises, however, I was met by a messenger who told me that Mrs. N. and her mother were very ill, and thought they were poisoned. On arriving at the house I found both ladies vomiting severely, and complaining of extreme pain and a burning sensation in the stomach. Mrs.

[1] Thaxter and Brother, 291 Washington Street, and J. H. Allman, 14 Bromfield Street, are prepared to fill metrical orders, and to furnish suitable prescription blanks.

R. was also purging freely, though her daughter was not. Not knowing what the poison was, I could give no chemical antidote, and had to content myself with giving white of egg, sweet oil, milk, etc., and after a few hours, to counteract the depression of the system, I gave brandy and water. The vomiting and purging lasted fully five hours, and during a part of the time the pulse was imperceptible in either patient. After this period the symptoms ameliorated, and they both fell asleep. For several days they were both confined to their beds, and were obliged to be extremely careful as to what they took into their stomachs. Mrs. N. seems now to have completely recovered. Mrs. R., however, has not been as well as before this occurrence, but has suffered with some cerebral symptoms which betoken a tendency to apoplexy. It may be doubtful, perhaps, whether this condition has anything to do with the poisoning. No cerebral symptoms were present at the time. Mrs. R. says that when taking the solution she noticed a very decidedly sweet taste. Neither Mrs. N. nor myself noticed it, however. The amount taken by me caused no nausea or vomiting, but did produce a severe burning sensation in the mouth, œsophagus, and stomach, which lasted perhaps an hour. It is impossible to estimate the amount taken by either of these ladies. My dose of bromide of ammonium to Mrs. N. had been eight grains. They may each have taken half of that amount, or twice as much.

Having satisfied myself that the poison was one that I had never before seen, I at once sent a sample of it to Mr. H. Carmichael, Professor of Chemistry at Bowdoin College and Assayer for the State of Maine. Professor Carmichael soon informed me that the article sent was the bromide of cadmium. The following were the tests he employed: —

(1.) Dissolved in water and treated with sulphuretted-hydrogen gas, a yellow precipitate is formed which is insoluble in ammonic sulphydrate.

(2.) Mixed with cyanide of potassium and heated in a closed glass tube, the cadmium is reduced to the metallic state.

(3.) Mixed with dipotassic sulphate and binoxide of manganese in a closed glass tube, the blood-red vapor of bromine is given off.

No fault whatever, I am happy to state, rests with the druggist here. He has kept bromide of ammonium in considerable quantity for a long time. At the time he obtained this bottle his supply had given out, and he had ordered a quantity from Boston. As it would be a week or more before this would arrive, he at my suggestion sent to the neighboring town of Orland for a small quantity, and had this bottle of bromide of cadmium sent. He sold it exactly as he received it, without taking off the outside wrapper of the bottle.

In all probability the error in labeling does not belong to the druggist

in Orland, though he seems entirely ignorant as to how long he had had the bottle or where he got it. He had, however, in his store another bottle exactly similar, and likewise wrongly labeled.

The gross and wicked carelessness probably lies at the door of the French preparers of it. Does no blame, however, attach to the importers for not knowing what they were issuing? As there may be hundreds of bottles thus wrongly labeled, I here give the exact labeling of the bottle, that all physicians and druggists who see this account may be on their guard. The label is as follows: —

Maison W^m^ CONRAD
ET. ROQUES et C^o^, Succ^rs

1 ex Bromure d' Ammonium angl.[1]

26, rue Vieille-du-Temple,
Paris.

All the soluble salts of cadmium are said to be corrosive poisons, but I can find nothing in regard to the action of this particular salt. As it is never used as a medicine and but little in the arts, except by photographers, it is doubtful whether it has ever been taken before.

RECENT PROGRESS IN THE TREATMENT OF THORACIC DISEASES.[2]

BY F. I. KNIGHT, M. D.

Differential Diagnosis by Physical Signs of Different Kinds of Pleural Effusion, Baccelli.[3] — Dr. Valentiner gives a brief communication concerning the views of Professor Baccelli, of Rome, on this subject. Hitherto we have been taught that it is possible by means of physical examination to diagnose the presence of fluid in the pleural cavities, but that no auscultatory differences resulted from different kinds of fluid; in other words, that dropsical, sero-fibrinous, and purulent fluids were all alike in the transmission of sounds to the ear of the listener.

Baccelli's work goes to prove the very opposite, namely, that the variety in the auscultatory phenomena will enable us to form an opinion as to the nature and constitution of the fluid in the pleural cavity. In order to form such a precise diagnosis, all disturbing sounds must be as far as possible excluded. The person whose chest is being auscultated should turn his face whilst speaking in a direction which is as nearly as possible at right angles to a horizontal line drawn through the middle of the effused fluid. The ear which auscultates should be

[1] The words inclosed by the lines are written, not printed.

[2] Concluded from page 415.

[3] Berl. klin. Woch., No. 21, 1876; London Med. Record, August 15, 1876.

pressed close against the chest which is examined, and the free ear should be closed with the index finger of the corresponding hand. By auscultating in this method, Baccelli has found that the thinner and more homogeneous the fluid in the pleural cavity is, so much the more easily, perfectly, and to greater distance will it transmit the vibrations of the voice, and even whispers. The principal conduction of sound is at the lower part of the collected fluid; whispered words are here most clearly accentuated with bronchial expiration, when the fluid is nearly homogeneous (serous effusions). The upper part of the effusion conducts sound worst, for there neither bronchial breathing nor loud talking can always be heard. In proportion to the thickness of the fluid, the conduction of sound is hindered. Hence effusions with fibrinous flakes or with blood and pus corpuscles conduct sounds badly. A true empyema is the worst conductor of sound of all the effusions. Fluids with granular corpuscles, fat and fat-crystals, and other not morphological or fibrinous elements, behave, as regards auscultation, very much like hydropic effusions. The physical explanation appears to be as follows. Unlike gases, fluids conduct tones with intensity proportioned to their likeness and homogeneousness, whilst the waves of sound are conducted somewhat more quickly, but with diminished intensity, through thicker and heterogeneous fluids, which are mingled with elastic solid bodies. In the case of mixed coagula and corpuscular elements, as well as in the case of exudations inclosed in thick, villous membranes, there is, in consequence of this mixture and variety of conducting media, more and more reflection (refraction?) of the sound-waves, instead of their being conducted in almost straight lines, as in the case of homogeneous endo-pleural fluids, which are strong conductors. At the point where the lung is most compressed, towards the base of the exudation, the sound waves are probably reflected but little, and thus little decomposed. In other words, they are not much affected by interference at this spot. It is perhaps on similar acoustic principles that a pericardium so distended with fluid as to be absolutely dull on percussion often conducts bronchial râles from adjacent portions of lung with remarkable clearness (Skoda's consonance, or phenomena of resonance of Baccelli).

Action of Climates on the Treatment of Pulmonary Phthisis. — Dr. H. Gouraud[1] says, If we merely desired to discover the places on the face of the earth where phthisis is absent or rare, the task would be comparatively simple. They are to be found from the stations of Southern France and of Italy, even to Norway, the Faroe Islands, and Iceland; from mild, humid insular stations to the steppes of the Kirgoi, with their eminently dry climate. Norway, Iceland, and the Faroe Islands have cold, humid climates, and yet appear to enjoy an immunity

[1] London Medical Record, July 15, 1876, from L'Union médicale.

from phthisis. On the other hand, the cold and dry steppes are now much employed in combination with the use of koumiss. Patients are sent in forty hours by rail from St. Petersburg to Nijni-Novgorod, and from that place to Samara, in the steppes, in twenty hours by steamer. There they stay from May 1st to October 1st. What greater contrast can there be than that between the steppes of Russia, the South of France, and the climate of Madeira? Yet all are sought for the same object. Granting that many of these places enjoy a considerable degree of immunity from phthisis, why does this immunity not extend to visitors? The answer is, Because phthisis is not a product simply of climate. It is also a social disease. If there be any fact certain, it is this, that the more people become crowded together, the more industries are developed, the more does phthisis show itself. Crowding in small rooms at home, too early labor, the inhaling of foul air or of deleterious particles in manufactories, a too sedentary life, are frequent causes of phthisis. The great centres of industry are the places which yield the highest mortality from it. As climate is not the sole cause of phthisis, so climate alone will not produce immunity from it. The absence of a particular malady from a place does not prove that the place is a prophylactic against that malady. A climate may have tonic and exciting properties which favor the nutrition and the good health of persons born in that climate, and employing a diet and mode of life suitable to it. Yet the same tonic and exciting qualities may not suit subjects already attacked by such and such maladies, and having irritable or vulnerable organs. The immunity of the natives of a place from any particular disease, therefore, only furnishes a reason for studying it in its climatic relations. Immunity of itself affords no guarantee for patients; but if it is proved that there are fewer sick of a given malady, say at a certain elevation, this fact is so far favorable to altitude. If, further, it is verified by direct observation that patients in such stages of their complaints derive benefit from residing in the mountains, this is enough to recommend mountains, especially if they have already tried other climates without advantage.

It seems now to be generally admitted that the number of cases of phthisis diminishes as the elevation increases. How is this to be explained? In the first place we must allow that many of the factors of phthisis are absent at a certain elevation, that is, all of them that are connected with social life and aggregation; but besides this, what further explanation have we? Hirsch says that it is because the alternations of temperature are less marked in the mountains than on the plains. Brehmer says that the air is more tonic and favorable to nutrition. Jourdanet says that the cause is the deficient supply of oxygen. It is true that the relative proportions of oxygen (21) and of nitrogen (79) are the same in the mountains and on the plains, but as the

higher layers of the air have less density, the quantity of oxygen in them for each inspiration is less. Experiments have shown that the quantity of oxygen in a litre of air at the height of fifteen thousand feet is about one half what it is on the plains. The result of this is that, in order to get the necessary supply of oxygen, the inspirations become deeper and more complete, and that the thoracic cavity increases in capacity. The pulmonary cells, dilated and enlarged, become to a certain degree emphysematous, and in the end produce the dyspnœa called asthma montanum. It seems also probable that the increased expansion of the pulmonary cells leads to a certain degree of anæmia of the lungs, and this anæmia, like emphysema, is considered to be antagonistic to tuberculosis. The diminution of atmospheric pressure causes a derivation from the centre to the circumference, and produces a real revulsion towards the cutaneous surface. To these causes Lombard adds a certain excess of carbon in the system, consequent on the diminished supply of oxygen, and he thinks that this has something in common with the state induced in islanders (who enjoy immunity from phthisis) by the free use of oils and animal fats or butter. We thus understand how mountain air may be useful in certain cases and in certain periods of phthisis. It acts by its purity, by its dryness and transparency, as well as by the diminution of atmospheric pressure. Gouraud concludes by observing that after all neither barometer nor thermometer, neither hygrometer nor anemometer, can determine what is the suitable climate for such and such a phthisical patient. All depends on the nature of his constitution, and on the way in which the various meteorological conditions affect him.

Dr. Dennison, of Denver, Colorado, read a paper before one of the sections of the International Medical Congress at Philadelphia, September 7th, on the influence of high altitudes on the progress of phthisis.[1] His deductions from analysis of cases were as follows: (1.) Cool, dry climates are best. (2.) Favorable climatic attributes, such as diathermancy and dryness, are increasingly found with increasing elevation. (3.) High altitudes are favorable in incipiency of chronic, inflammatory, and hæmorrhagic cases of phthisis; in others, the more acute the inflammatory process, or more active the pulmonary hæmorrhage, the more tentative should be the rise in elevation. (4.) Partial recovery necessitates permanent residence. (5.) High altitudes become unfavorable or negative in proportion as phthisis is complicated with certain forms of cardiac disease, or the stage of "softening," in acute cases, with extensive deposit, or nervous irritability and lack of desirable will-power. (6.) Early change of climate and mode of life are more positively favorable to cure in a resort to high altitudes. (7.) Stimulating effect of high altitudes on respiratory organs is a most important agent

[1] New York Medical Record, September 23, 1876.

in arresting chronic phthisis. (8.) High altitude is palliative or curative with or without change of occupation and out-door life. (9.) In incipient cases the patient should receive benefit of doubt, in view of possibility of error in declaring non-existence of phthisis. (10.) Resort to a well-chosen, elevated climate should form part of a physician's advice to every consumptive, unless specially contra-indicated.

Syphilitic Phthisis. — Fournier,[1] in an elaborate lecture on the pathology and clinical features of syphilitic phthisis, recognizes only two forms of syphilitic lesions, (1) simple hyperplasia and (2) gummata, and says that the diagnosis of this disease is very difficult. There is a remarkable tolerance of the lesions by the system, even when they are extensive, the patient retaining his flesh and strength to a considerable degree. When this is the case syphilis should be suspected. M. Fournier admits that this tolerance of the system is seen also in scrofulous phthisis, and therefore cannot be depended on for diagnosis; but he advocates in all doubtful cases the application of specific treatment, which will soon settle the question. The treatment recommended consists of large doses of iodide of potassium (two to six grammes daily), and small quantities of mercury by inunction, fly-blisters, cupping, and iodine locally, cod-liver oil, bark, etc. M. Fournier ends with the following axioms: (1.) Tertiary syphilis can produce in the lungs lesions which either locally, or by reacting on the general health, simulate pulmonary phthisis. (2.) These pulmonary lesions of syphilis are often amenable to specific treatment. However grave and important they may appear, they are far from being always beyond the resources of art. (3.) Consequently, when a case of pulmonary lesion presents itself, it is important, unless the existence of tuberculosis be quite certain, to ascertain if the lesion can be traced to syphilis. It is necessary always to bear in mind that syphilis is a possible cause of pulmonary lesions. (4.) When syphilis can be suspected to be the cause, the primary indication is to prescribe specific treatment, which in similar cases has been sometimes followed by the happiest results.

Puncture of the Pericardium. — In a paper communicated to the Académie de Médecine, by M. Henri Roger,[2] the author dwells upon the difficulties in the diagnosis of pericardial effusions, and he quotes in illustration two cases operated upon by Tigla and Trousseau, in one of which a thin-walled dilated heart was mistaken for an effusion into the pericardium; in the other case an hypertrophied heart, surrounded by membrane floating in only a small quantity of serosity, was found post mortem. But even when the diagnosis is made, it is very difficult to decide on puncture, inasmuch as the grave symptoms may not be due

[1] Gazette hebdomadaire de Médecine et de Chirurgie, November and December, 1875; London Medical Record, July 15, 1876.

[2] Bulletin de l'Académie, No. 44, 1875; London Medical Record, July 15, 1876.

simply to the presence of the effusion, and operation may do serious injury (in six out of fourteen cases collected by Roger, death followed so closely that it seemed to be attributable to or at least hastened by the operation). We must not forget, either, that evacuation of the serum in a case of acute pericarditis will almost necessarily be followed by pericardial adhesion.

Paracentesis of the pericardium is a far more delicate operation than puncture of the chest cavity. The mammary artery coursing along four or five millimetres from the margin of the sternum, the diaphragm, the left lobe of the liver, sometimes much enlarged, the lung and pleura, and finally and most importantly the heart itself, have to be avoided by the surgeon. M. Roger quotes two cases, one of M. Baizeau's and one of his own, in which the right ventricle was apparently punctured in operations designed for the relief of effusion into the pericardium, and one hundred and two hundred and twenty grammes of venous blood respectively removed. Both cases survived the operation. Another disagreeable occurrence which may happen, even if the right place be chosen, is that the puncture is followed by no escape of fluid. The pericardium, being only in lax connection with the wall of the chest, and much thicker and harder than the pleura, readily recedes before the trocar. With the fine needle of the modern aspirator, however, this is less likely to happen. The puncture should always be made directly from before backwards, with a slight subsequent inclination of the point of the needle downward, as advised by Dieulafoy, in order to avoid the ventricle during systole. The fifth intercostal space at a point intermediate between the sternum and the nipple, but rather nearer the latter, is the place to be chosen, as a rule, for puncture. But the heart's apex, instead of impinging against the fourth space or fifth rib, as is usual in such cases, may be lowered by dilatation, or drawn downwards by an adhesion to the diaphragm, when a lower point must be chosen for the puncture.

In only one case of the fourteen was a "true cure" effected, and M. Roger concludes that, notwithstanding undoubted improvement in the modern operation, it remains a dangerous and doubtful remedy, to be hazarded in extreme cases.

DWIGHT ON THE ANATOMY OF THE HEAD.[1]

A MONOGRAPH on pure anatomy does not appeal to the interest of general readers. That one hundred and thirty octavo pages should be devoted to a minute accoun tof so limited, if important, a part of the human frame, with the

[1] *The Anatomy of the Head.* With Six Lithographic Plates representing Frozen Sections of the Head. By THOMAS DWIGHT, M. D., Professor of Anatomy at the Medical School of Maine, etc. Boston: H. O. Houghton & Co. 1876.

knowledge that it will find comparatively few readers except among teachers and students, is evidence of the progress which is making in the requirements of professional study. As a community we may, in some degree, take credit to ourselves that, although emanating from a gentleman holding a high position in the Medical School of Maine, this treatise is also the work of a teacher identified with our own city and with the Medical Department of Harvard University.

Professor Dwight's Anatomy of the Head is no holiday book in which learning is sought to be made attractive by "side issues." It offers few distractions of either comparative anatomy or surgery. Including all above the hyoid bone as belonging to the head, he describes, in consecutive order, The Skull, The Brain and its Membranes, The Skeleton and Superficial Parts of the Face, The Orbit, The Nose and Neighboring Cavities, The Region of the Ramus of the Jaw, The Pharynx, The Parotid Region, The Ear, The Occiput, The Circulation, and, finally, The Innervation. The descriptions are from nature, and represent the usual and typical anatomy only, each topographical region being described in all the mutual relations of its parts. The preface justly remarks that this method of instruction is somewhat overlooked in America, attention being directed chiefly to descriptive anatomy, and the relation of parts to one another neglected unless of evident surgical importance. A number of wood-cuts and six lithographs of frozen transverse sections of the head illustrate the text.

This method of illustration, originating with the distinguished Russian surgeon, Pirogoff, was first introduced, on a large and magnificent scale, by Wilhelm Braune, in a great atlas of thirty-one plates (Leipzig, 1872). It certainly presents advantages, and is of special interest to the skilled anatomist. It is, however, of so novel a character that we hardly feel able to express an opinion as to its usefulness in the illustration of a part of the body so complex and intricate as that which forms the subject of this volume. The author himself affirms that *section* can never take the place of *dissection*, maintaining only that it affords views not to be obtained in any other way, and encourages the kind of study which teaches anatomy in its most practical aspects.

It will surprise the reader to see in how brief a space an admirable account of the general construction of the brain is given. Commencing with the medulla oblongata, the various parts are described as they expand from this central point, while by following the fourth to the third and lateral ventricles the interior of the brain is, as it were, unfolded to view.

Among the newer points of anatomy which attract attention may be mentioned the fact that the temporal ridge is made up of two curved lines. Starting from the external angular process of the frontal bone the upper one runs over the parietal eminence to the lambdoidal suture, which the lower one never touches. The latter crosses the lower part of the parietal bone to the root of the zygoma. The lower curved line marks the origin of the temporal muscle. The upper curved line serves for the attachment of the temporal fascia.

The curious facts are stated that the mouth is kept closed mainly by atmospheric pressure, assisted by the adhesion of the mucous surfaces of the tongue

and palate, and not by muscular action; and that the tongue almost completely fills the mouth, the soft palate lying in contact with its posterior portion, the uvula, when of ordinary size, approaching closely to the epiglottis. This point is well shown in Plate IV. of the frozen sections, and practically illustrates the irritation caused by an elongation of this portion of the soft palate.

The sublingual bursa, "overlooked by many authors, but lately very well described by Tillaux," is not unfamiliar to surgeons. It lies behind the sublingual glands, extending as far back as the second molar tooth, and is partially subdivided by the frænum. It is lined with epithelium, and contains numerous small chambers.

The pages treating of the mouth and pharynx constitute one of the most interesting portions of the book.

Dr. Dwight's volume thus briefly noticed does not admit of quotation or of review at length, except by those who are his peers in anatomical knowledge; but we commend it to every student or reader interested in its subject for patient and rewarding perusal. As a new version of an old story it appeals with especial interest to those who have experienced the delights and quiet enjoyment of painstaking dissection or careful anatomical study. It emphasizes the fact that descriptive anatomy is no exhausted science, and attests anew that the combined exercise of observation and thought offers opportunities by which whoever wills may still rival or even surpass those who have already been its votaries.

NEW YORK STATE LUNATIC ASYLUM.[1]

This asylum has been established thirty-three years, during which time eleven thousand eight hundred and thirty-one patients have been under treatment. Of this number thirty-seven per cent. have recovered, fifteen per cent. have been much improved, and about twelve per cent. have died. The average number under treatment last year was five hundred and ninety-five. The medical staff consists of the superintendent, Dr. Gray, four assistants, and a pathologist. This is the first instance in this country where the State has authorized special pathological investigations. Dr. Gray says that systematic microscopic observations were made here and reported a year before similar experiments were instituted at the West Riding Asylum, England. The importance of a systematic use of such rich stores of material as every large asylum affords cannot be too strongly urged upon state authorities.

The present report gives the history and complete necropsy in twenty-two cases, which we may find time to examine and condense for the readers of the Journal hereafter.

Dr. Gray reports among the admissions of thirty-three years one hundred and seventy-three as "not insane," which would prove a rather startling item were it not explained that under this head are classed dipsomaniacs, opium-eaters, hysterical cases, and cases of delirium which are sometimes mistaken for permanent insanity. That none of these cases were the result of fraud or

[1] *Report of the State Lunatic Asylum at Utica, N. Y.* 1875.

conspiracy is evident from Dr. Gray's cordial indorsement of a series of resolutions recently passed by the association of superintendents, which he prints entire in his report. Resolution eight says, "that sane persons are often falsely imprisoned on the pretense of insanity is not true, and we believe it is extremely rare that a single case of wrongful imprisonment in any hospital in this country has taken place."

These resolutions are directed against the unwise and meddlesome legislation now in force in some States (such as trial by jury in every case of admission, as in Illinois), whereby mistrust is engendered instead of confidence, and the physician's efforts to lead his patients into the light of reason are hindered by restrictions and interference on the part of those who know nothing of the workings of the insane mind. In regard to the locked letter-boxes posted in each of the asylums in some States (our own, for instance) they say, "it is incessantly proclaimed to each patient from the walls of his apartment that the people to whom he has been intrusted are not trusted by others, and that any aid and comfort he may require must be sought from a power paramount to theirs." The valuable information to be obtained from letters respecting the mental condition of patients is mentioned, and any law which compels or allows the sending of the letters of women, often containing matter the very thought of which, after recovery, will overwhelm them with mortification and dismay, is denounced as an outrage on decency and common humanity.

The trustees, in their part of the report, say that they have always favored the plan of general asylums situated in centres of population, each to accommodate all the insane within a given area. When the Willard Asylum for chronic insane persons was established, several years ago, a law was passed that no patient whose insanity was of more than a year's duration should be received at Utica. This law has worked imperfectly, and has been but partly carried out. The effect has been that patients from distant parts of the State have not availed themselves of hospital treatment until the best time for treatment has passed; and cases in the vicinity, where the disease has been allowed to exceed a year's duration, have been cut off from hospital treatment entirely. That many cases recover after the limit fixed by this law is well known. In the last year, at Utica, of one hundred and thirty-two recoveries, in twenty-one insanity had existed from one to eight years before admission, and forty-one had been under treatment from one to five years in the asylum.

The facilities for occupation and amusement at Utica are excellent. The farm, shops, kitchen, laundry, and sewing-room serve to employ time usefully, while riding, walking, reading, lectures, and games make it pass pleasantly. A convenient and well-appointed theatre, with an amateur company of officers and patients, furnishes, with occasional outside assistance, a very valuable form of entertainment.

Dr. Bucknill, in his recent tour, visited Utica, and highly commended its management. This gentleman's comments and criticisms are generally fair and discriminating, except when he mounts his English hobby of absolute disuse of mechanical restraint, and runs a tilt at some American windmill. The universal doctrine, on this side of the water, is that this form of restraint is occasionally necessary, and that its use should be left to the discretion of each

superintendent, like any other form of treatment. It is resorted to by the friends of patients, at home, more freely and in more objectionable forms than by asylum officers. Dr. Gray reports, out of four hundred and thirty-two admissions, fifteen as brought to the hospital under restraint: eleven wore handcuffs, one shackles, one camisole, one muff, and one straps. This is nearly four per cent., or twice as many instances of restraint as is usual in hospitals. It will not excite surprise when we consider the popular fear of insane violence, and learn that of the whole number (four hundred and thirty-two) admitted, one hundred and twenty-three had made homicidal or suicidal threats or attempts.

Dr. Bucknill was pleased to find no restraint in use at the time of his visit, and quotes Dr. Gray, in one of his letters to the *Lancet*, as saying that he differed from his American brethren on this subject. The inference was that no mechanical restraint was ever allowed at Utica. This being so, we were horrified to notice, in the list of articles made last year by the tailor, this item, namely, "2 camisoles"! T. W. F.

ROBERTS'S THEORY AND PRACTICE.[1]

THE appearance of a second American edition of this valuable work is an indication of the appreciation in which it is held throughout the country. We have little to add to our notice of the former edition,[2] but we take pleasure in observing that there is a new chapter on the Diagnosis of Acute Specific Diseases, besides other additions, and that the book has received the careful revision which recent observation and the latest advances in knowledge require.

A PEOPLE WITHOUT CONSUMPTION.[3]

DR. WIGHT, in a little pamphlet of eight pages, gives an interesting account of the people, four thousand in number, who live on Walden's Ridge. He has not been able to find that a well-authenticated death from consumption ever occurred among the natives. The ridge is from two thousand to two thousand five hundred feet high. The mercury has never been known to be above 95° F. or below —10° F. The people live mostly in log-houses, which admit plenty of fresh air, burn wood, wear no flannels, and live on corn-bread, bacon, and coffee. They are mostly farmers and very few appear to work hard. The Cumberland table-land, of which this ridge is a part, seems to offer an inviting field for those predisposed to pulmonary complaints. It comprises territory enough to make a good-sized State, and the "city of Cincinnati has determined to build a railroad through the very centre of that great table-land in the north part of the State, connecting with Chattanooga in the southern part."

[1] *The Theory and Practice of Medicine.* By FREDERICK T. ROBERTS, M. D., B. Sc., M. R. C. P., Fellow of the University College, etc. Second American from the last London Edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1876.

[2] Journal, xc. 42.

[3] *A People without Consumption, and some Account of their Country, the Cumberland Table-Land.* By E. M. WIGHT, M. D., Chattanooga, Hamilton County, Tennessee.

lay, is regarded as essential for the protection of public health, and as conducive to individual economy.

The exercises which it had been proposed to hold in the evening were omitted.

Second Day. Wednesday, October 4th. After the transaction of some business, the regular exercises were begun by the Hon. Emory Washburn, who read a paper on Expert Testimony and the Public Service of Experts in Matters affecting Life and Health. After a few preliminary remarks the speaker said he should confine himself to the general matter of the testimony of experts. The course pursued in courts where experts, in contradiction of other witnesses, are called to testify was reviewed, the latter being allowed only to testify to what they know personally, while the expert is permitted to give to the jury his theoretical deduction based upon argument and professional skill, with his argument in support thereof. A supposititious case was given in illustration, where in a murder by poisoning the weight of evidence rests entirely upon expert testimony based on the expert's knowledge and skill in science. But if in nine cases out of ten a certain result follows certain causes and fails in the tenth, then certainty is changed to probability; and herein consists the difficulty in expert testimony. The witness may believe his statement, but nevertheless his knowledge may be simply empirical, possibly false. He would not, however, be amenable to the laws to punish perjury.

Then, again, experts often differ in their conclusions derived from known circumstances, thereby bringing their evidence into disrepute. Mr. Washburn cited many cases where such differences have occurred. In cases where sanity or insanity is concerned, the inner workings of the mind were so complex and varied that it was difficult for experts to testify corroboratively. One who has known the subject for years might judge differently from an expert on the opposite side, whose theory might be logically correct as deduced from his knowledge of the person whose sanity is in question. Another case where experts differ is where the moral insanity of a prisoner is in question, extreme atrocity being looked upon by one witness as evidence of moral insanity, while an expert on the opposite reached a contrary conclusion. This matter of probability was further illustrated by cases where experts differ on the question of blood corpuscles. The importance and nature of this testimony is, however, becoming better understood each year. The speaker then alluded to certain witnesses who by omitting certain facts and hiding others prostitute science to personal pique or private gain. They are called upon usually to testify, not to facts, but to opinions. In Prussia they have a toxicologist, appointed by the government, and a board of medical experts; in Scotland experts have to first submit their evidence in writing, after which they are cross-examined orally, and their spoken testimony compared with the written; in France the government decides who shall be called as experts. The speaker also gave the different plans proposed in England and this country, including that which has been before the Massachusetts legislature, to have a regularly appointed board of experts, and thus expel from the practice those who testified simply for the pay they received. The paper concluded with a consideration of what men of science owe to themselves, to elevate the character of expert testimony, by discountenancing pretenders.

Prof. Wolcott Gibbs, who was to have followed in the discussion, was unable to attend on account of sickness, and his paper was read by Prof. H. P. Bowditch. The first proposition discussed was whether, under the present system as adopted in courts, the testimony of experts is brought out fully and fairly. The proper course suggested was that the expert should be called by neither side, but the appointment left with the judge, who should have no bias on either side. It was also thought that the testimony should be given in writing. When testimony is given orally, if a witness hesitates in his answer to the questions of a shrewd lawyer, his very hesitation, which should be considered an evidence of his desire to answer correctly, is represented to the jury to be proof of the worthlessness of his testimony. The paper concluded with a consideration of what plan could be devised by scientific men to correct the system of hired experts. The following resolve was presented: —

That a committee of five be appointed to inquire what methods of obtaining expert testimony prevail in Continental Europe, and to report at the next meeting of the association a plan of procedure based upon the information thus obtained.

Professor Horsford had hoped that ex-Governor Washburn would propose some specific scheme in this matter of experts. At present the great difficulty is that the experts are associated with the counsel and not with the court, where they belong. At present the lawyers who call them decide how much of the truth they shall testify to, and not until their appointment is taken from the hands of the counsel and put into those of the judge will there be any improvement.

Professor Ordronaux, commissioner of lunacy of New York and professor of jurisprudence in Columbia College, said that Governor Washburn had omitted the main point of the question. The great difficulty in expert testimony was that we treat all scientific conclusions as definite, but whereas in chemistry everything was certain, in that part of science relating to physiology, or life, there was always present an uncertainty. Skilled testimony was therefore a paradox from its very start. It was not testimony proper, but a judgment of the facts submitted to it for consideration. The speaker's illustration of the unreliability of the testimony under discussion was both elaborate and able, especially in the difficulty of correctly explaining data.

The professor then referred to the cross-examination of these witnesses, which he defined as a propounding of the most grotesque and absurd questions by the assistant counsel, who has been cramming for a week for the purpose. The cross-examination was therefore utter folly, and the effect was to arouse the indignation of first-class men, and make them determine never to testify again, which gradually lowered the class of experts until only the zeros remained as such. The proper position of experts was that of a body of independent referees.

The third paper was read by Dr. Steiner on Expert Supervision of the Construction and Internal Arrangement of Public Institutions in order to Prevent Injury to the Health of their Inmates. He showed the responsibility of the State for the supervision and protection of certain physical and mental wants of the people, to provide for which hospitals, schools, churches were indispen-

sable. Permanent buildings were required, for such institutions were needed, in which the greatest care should be taken lest they should be detrimental to health. The remedy for the injurious consequences of defective construction lay in the employment of proper sanitary supervision in their erection, which could be done only by competent experts, examination by whom should be made imperative by the state.

The evening was opened by the Rev. E. E. Hale, who made an excellent address. He was followed by Prof. Austin Flint, of whose address we give an abstract elsewhere.

Professor Runkle made some interesting remarks, showing how the health of the students at the Institute of Technology was improved since the introduction of an arrangement enabling them to obtain regular meals.

Third Day. Thursday, October 5th. The following gentlemen were elected officers for the coming year: President, Dr. John H. Rauch, Chicago; first vice-president, Dr. L. H. Steiner, Maryland; second vice-president, Dr. E. M. Hunt, New Jersey; treasurer, Dr. J. Foster Jenkins, New York; secretary, Dr. Elisha Harris, New York.

Prof. E. S. Wood, of the Harvard Medical School, read a valuable paper on the Relation of Illuminating Gas to Public Health, of which the following is an abstract: —

The processes resorted to in the manufacture of coal gas were first briefly described, and it was stated that the work in the retort houses had more influence upon the health of the employés in gas works than any of the other operations, for the reason that both the roof and the sides of the retort houses are always open, the former to permit the escape of the smoke and products of combustion from the fires, and the latter for wheeling in the coal to the retorts and taking away the coke. This condition of things necessarily subjects the men employed there to excessive changes of temperature and violent draughts of air, which results in a very large proportion of cases of phthisis and bronchitis. The coal and coke dust may also add to the irritation of the air-passages.

The purification of gas may be a nuisance to the whole neighborhood of the gas works unless properly performed. If the purifying material be lime, the foul and noxious gases should be removed by a ventilating apparatus and consumed before the purifying boxes are opened, or the principal portion should be first removed by wet lime, which should be so disposed of, as is done in this city, as not to prove a nuisance, or the iron mixtures should be used which combine chemically with the sulphur in the gas and fix it.

Petroleum or naphtha gas was mentioned as not being injurious. Considerable stress was laid upon the manufacture of water-gas, and health officers and the medical profession generally advised to be on their guard against the admission of pure water gas, which is a mixture of nearly equal parts of hydrogen and carbonic oxide, for heating purposes. This mixture is comparatively odorless, so that if a leak occurs and the gas escapes into an inhabited room fatal results are liable to follow, several cases having happened in Europe. If this gas, however, be enriched for illuminating purposes with petroleum, naphtha, or cannel-coal gas, which impart to it a powerful odor, it is but little, if any, more dangerous than common coal gas, which contains from five to eight per cent. of carbonic oxide.

The second paper was read by Dr. L. F. C. Garvin, of Lonsdale, R. I., on the Sanitary Requirements in Large Factories. After a brief description of Lonsdale and its factories, he gave a statement of the principal causes of the frequent accidents occurring in factories, with illustrative cases. From this he drew a list of proposed remedies, including the legal prohibition of the employment of children, the careful warning of all inexperienced persons concerning places of danger, the cleaning of machinery only when in rest, and the inclosure of all points of danger. Passing from the surgical to the medical branch of the subject, he spoke of the causes of high infant mortality in factory villages, the most important of which was no doubt the extent to which artificial food is resorted to. In reference to the chronic diseases, such as dyspepsia, anæmia, and phthisis, he suggested as remedies short hours for all, especially youth, improved dwellings, and better education. In conclusion, he offered the following resolution: —

Resolved, That the due protection and welfare of factory operatives require: (1) half-day schooling for children under sixteen years of age; (2) uniform hours of labor, not exceeding sixty per week; (3) frequent inspection of the mills and tenement-dwellings of factory villages, and of the milk sold to the inhabitants, by an authorized public health officer.

The resolution was adopted.

J. Herbert Shedd, civil engineer of Providence, read a paper on Water Supplies for Large Institutions and Small Communities.

Dr. A. L. Gihon read a paper on Safety in Traveling. He treated especially the question of traveling by sea, and advocated the inspection of every ship that entered or left port. There is apparently a great need of improvement in the sanitation of both government vessels and merchantmen.

Dr. Bowditch presided at the evening session.

Mr. Henley, of London, gave a remarkably concise description of the sanitary system recently established in England, and of the changes through which it was reached. He said that all sanitary matters are now under the charge of local boards, who are required to abate all nuisances, provide pure water and good drainage, and supervise the construction of all new buildings, to the end that proper regard be paid to ventilation, etc. In case of neglect of duty on the part of these local boards, an appeal lies to a central board, which forthwith sends an inspector and enforces such action as he may find necessary, through a mandamus from the Queen's Bench.

The first regular discourse of the evening was by Mr. Charlton T. Lewis, secretary of the New York Chamber of Life Insurance. The subject was Ancient and Modern Hygiene contrasted; Practical Results and Value of the Progress already Made, and Mr. Lewis's purpose was to show that the duration of human life has steadily increased with the progress of civilization. The causes of this increased average longevity he found in the improved care of infant life; the care of the sick, of the infirm, and of the aged; the avoidance of epidemics and of other calamities, such as famine; the comparative exemption from personal violence, and the fact that the preservation of health is beginning to be recognized as an end in the organization of society. He then criticised sharply the theory of improving the race by selection, or the survival

of the fittest, and declared that the best symbol of human progress is a venerable man decayed in body, but preserving the full energies of a wise, benevolent, and vigorous mind.

This was followed by a very suggestive paper on the Rights, Duties, and Privileges of the Community in Relation to those of the Individual in Regard to Public Health, by Dr. John S. Billings.

Fourth Day. Friday, October 6th. The secretary read a report on disinfection in yellow fever, as practiced in New Orleans, in the years 1870–76 inclusive, by C. B. White, M. D., of the State Board of Health for Louisiana; and a report upon scarlet fever, as it prevailed epidemically in Baltimore and Belair, Maryland, by John Morris, M. D., of Baltimore. These reports were referred to the publication committee to be printed. Mr. James T. Gardner, C. E., read a paper on The Relations of Topographical Surveys and Maps to Public Health Studies, which was discussed by Professor Pickering, Prof. T. Sterry Hunt, Dr. A. N. Bell of Brooklyn, Dr. John S. Billings, Prof. J. D. Runkle, and Professor Whitney. Prof. W. H. Brewer, of the Sheffield Scientific School, Yale College, read a paper on the Gases of Decay, and the harm they cause in dwellings. Col. George E. Waring's paper on the Sanitary Condition of Country Houses and Grounds was in the main a continuation of the previous topic. The report from the committee on the proposed sanitary survey of the United States was read, stating that it was intended to call a meeting of the committee in December, when they would seek the coöperation of those interested in topographical surveys, national and state censuses, and vital statistics. A resolution was then passed to the effect that the committee on a preliminary sanitary inquiry and survey be requested to confer with the superintendent of the national census, the commissioners and directors of the state topographical survey of New York, and the superintendents of the census in each State, with reference to the work which this committee is projecting. Resolutions were also passed indorsing the statement made in Mr. James T. Gardner's address, and in favor of a topograpical survey as the basis of sanitary surveys. Dr. Ezra M. Hunt, of New Jersey, read a paper on the Sanitary Appointments of Dwelling-Houses regarded as Essential and Obligatory. Mr. Frank D. Sanborn extended an invitation to the association to visit the Training School for Nurses, which was accepted. Papers on Florida as a Health Resort, by Dr. F. D. Lente, and on the Water Supply of Cities, by Dr. J. M. Toner, of Washington, and reports on the spring, well, and river water of the Department of the Platte and on a new method of observation in medical climatology, by Charles Smart, and on summer resorts for debilitated children, by Dr. Jerome Walker, were referred to the publication committee. Dr. Elisha Harris moved a resolution to the effect that the prevalence of yellow fever in the South indicated the necessity of better municipal measures for its prevention. Resolutions were adopted expressing the thanks of the association to the Institute of Technology and the press, and recommending the establishment of state boards of health. The association adjourned to meet at Chicago on the third Tuesday of September, 1877.

SANITARY SCIENCE.

The meeting of the Public Health Association has proved a success. The numbers were not large, but the members were in earnest and the work which they did was good. There was no loose talk, no hurried crudities; all was done deliberately. The suggestions offered on many points were very valuable, and in time may be carried out. We believe that public interest is aroused, and that the people are rapidly preparing to listen with respect and interest to views and proposals that a few years ago would have been scouted as visionary and absurd. The daily reports of the ravages of the yellow fever in the South are as many eloquent appeals for the study of sanitary science and the enforcement of its dictates. The fever was carried from the West Indies to Brunswick; thence it was allowed to work its way to Savannah. The cases were for a time looked upon as sporadic; the existence of sporadic yellow fever may be questioned, but those concerned are inclined to accept it rather than to believe that an epidemic is at the door. The inhabitants of Savannah "laid this flattering unction to their souls" till at last self-deception was no longer possible. Of thirty-two thousand inhabitants one half left the city, and of the remainder probably eleven hundred will have died by the time this appears. Sanitary science supported by the law might have confined the disease to Brunswick, or failing this it might have made Savannah far less liable to its ravages. We are informed that the sewers of that city were half full, and that there was no water to flush them. Much might be said in favor of some central power to direct in matters of quarantine, taking the authority away from small municipalities, but the question is surrounded by difficulties, political as well as scientific. We give in our report a pretty full account of the discussion on experts. All were agreed that the result of the system is very bad, though there was some difference of opinion as to whether the legal or the medical profession is most to blame.

MEDICAL NOTES.

— The following decision of the Supreme Judicial Court, rendered October 2d, is of interest to the profession. On November 4, 1871, the Mutual Life Insurance Company of New York issued a policy of insurance for $1000 on the life of Flora A. Hatch. The woman died by reason of a miscarriage produced by an illegal operation performed upon her. The company refused to pay the money, and the case was carried to the Superior Court, whence it went to the Supreme Court, which has just given the following decision: —

The voluntary act on the part of the assured, resulting in her death, was of such a character as to preclude the defendants from assuring against the consequences.

— According to the *Vienna Medical Press*, the homœopaths have discovered a new remedy for tape-worm. Taking the hint from the well-known popular belief that a snake is charmed by the sound of soft music, the homœ-

opathic doctor places the inferior orifice of the patient's intestinal canal in communication with a music-box, which is set a-playing. The tape-worm quickly makes his appearance head foremost, and winds himself along the connecting link toward the instrument; the latter is soon embraced in its turn, and the cure complete, for the parasite has, so to speak, abstracted himself.

— *The Medical and Surgical Reporter* of September 30, 1876, states that Dr. Gueneau de Mussy, in a communication to the *Gazette des Hôpitaux*, points out that one of the most frequent functional signs of cardiac affections is the difficulty that patients experience in preserving the horizontal position during sleep, generally requiring to have the head raised by several pillows. Nevertheless, it is not always the case, for there are some who can bear it, and some who even prefer it. These latter are generally affected with aortic insufficience, and he explains the peculiarity thus: when the aortic orifice, incompletely closed by its valves, permits a reflux of blood to the ventricle, the reflux is accomplished under the double influence of the weight of the blood column and the contraction of the aorta. The first of these influences acts to its full extent in the vertical position of the trunk, and is almost annihilated in the horizontal, so that, suppressing one of the co-efficients, the inconveniences of the lesion are lessened, and a relief produced which instinctively makes the patient seek the horizontal position. It is otherwise in lesions of the auriculo-ventricular orifices; the vertical position of the trunk renders the reflux of blood into the auricle less easy, and is instinctively chosen by the patient. In patients suffering from cardiac affections there is another circumstance which exercises a considerable and probably preponderating influence on the attitudes that they choose in decubitus. It is the state of the respiratory organs. Emphysema and pulmonary congestion demand the position that leaves the greatest freedom to the parts of the lung that can respire. The relative slowness of pulmonary complications in cases of aortic insufficience is one of the principal causes that permits patients to assume horizontal decubitus; whilst in mitral lesions these complications supervene much more rapidly.

— Dr. W. W. Vinnedge, in *The American Practitioner* for August, 1876, gives an account of an original method of suicide, practiced by James A. Moon, a farmer, thirty-seven years of age. Moon came to Lafayette, Indiana, and engaged a room in a hotel. He selected his room in the morning, left the hotel, and visited it again late in the afternoon, when he brought a heavy trunk, charging the porters to carry it with great care. After seeing his trunk placed to his liking in his room he went out again, and returned in the evening and was not afterwards seen alive. During the entire time of the preparations he was cheerful, talking familiarly with his acquaintances.

The instrument with which he accomplished his death has, on account of its construction and *modus operandi*, been called "the Moon guillotine."

The essential parts of the instrument were a broad-axe and lever screwed at one end to the floor. The axe was secured to this lever, seven feet in length, the lower two thirds of which consisted of wood, by upright pieces of bar-iron fastened with bolts and screws. The lever was composed of three separate parts, for convenience in transportation, firmly bolted together, the widened end being attached to the floor by means of hinges, to prevent any

possible lateral motion. At the other end of the lever, the iron bars to which the axe was attached were very heavy, in order to give the machine great effectiveness when put in motion. The axe, being elevated, was sustained at the proper angle for falling the greatest distance possible by means of a double cord attached to the free end of the lever and to a small hook in a bracket, which was securely fastened to the wood on the side of the window, about five feet from the floor. On this bracket was placed a lighted candle between the cords, which were consumed when the candle had burned sufficiently. The axe, being then unsupported, fell to do its fearful execution.

The suicide had placed an ordinary soap-box on its side with its open end just even with the line marked where the axe would fall. The box contained his head when he lay stretched out on the floor at right angles to the direction of the falling axe. Three pieces of pine board sustained his neck, and to keep his chin out of the sweep of the falling axe he had supported it by a little wooden rod, one fourth of an inch in diameter, placed across the box. This rod assisted in preventing the head and upper part of the trunk from being displaced.

Moon was not wholly indifferent to the fear of pain, and had obtained two ounces of chloroform, with which he saturated a quantity of cotton. The cotton was placed in the box so that the chloroform could be inhaled after he had adjusted himself by stretching out on the floor at right angles to the path of the guillotine, his head in the box and feet under the bed; his body was firmly fastened to the floor by straps and buckles. While the candle was burning he occupied this position, inhaling the anæsthetic. The flame reaching the cord it was burned through, and the axe fell with fearful force, severing the head completely from the body.

— Recent accounts from India state that the cholera has broken out in the mines at Garawara. There have been many deaths, and all the works have been stopped. We would call attention in this connection to the treatment of cholera by methods which have recently been alluded to in the JOURNAL. During the epidemic of 1866 at Vienna, Dr. Oser employed subcutaneous injections of camphor in sulphuric ether. From ten to twelve grains of camphor were dissolved in one drachm of ether. A subcutaneous syringeful of this was injected during the comatose stage, from which it always had the effect of reviving the patient, at least temporarily. Chloral has been administered subcutaneously, also. The solution should not be stronger than one part of chloral to seven of water. A writer in the *Practitioner* has employed this method in India with satisfactory results.

— The Paris correspondent of *The British Medical Journal* states that M. Panas, finding the customary methods of the treatment of ranulæ to be unsatisfactory, has lately resorted to the practice of injecting these tumors with a solution of the chloride of zinc (one part in ten), the results of which are most encouraging. M. Panas injects into the tumor from three to ten drops of this solution, which also varies in strength according to the age of the patient, and this he does with a Pravaz's syringe without previously emptying the tumor. M. Panas has also found this treatment to be successful in other tumors of the mouth besides ranulæ, and thinks it may be advantageously employed in all cases of mucous or serous cysts, in whatever part of the body they may occur.

CORONERS.

MESSRS. EDITORS, — It is not my purpose to rehearse the many errors and abuses arising from the present system of appointing coroners; they have been so many and great that the public has at last seen fit to inquire into them, and the daily press has reported adversely. The simple fact that in the Boston Directory for 1876 there are the names of thirty-six coroners, when one good coroner with three able assistants could do the whole of the work, is sufficient evidence that the law regarding the appointment of coroners is at fault. A careful study of the law will disclose no check upon the number that may be appointed, or penalty for malfeasance in office.

In the winter of 1871–72 I wrote several articles against the present system, advocating the repeal of all laws relating to coroners, and recommending as a substitute a court of inquest, presided over by a skillful lawyer. The medical officer will view all bodies suddenly deceased, or, where there are any suspicious circumstances connected with the death, make all necessary post mortems. He will then report in writing the probable time, cause, and method of death, leaving to the judge to perform the legal duties of his office. The intelligent (?) jury that is usually seen, hands in pocket, in the neighborhood of Court House Square can go West.

By this method, I am confident, the State will save in time (an inquest will not drag along for three or more weeks), in money, and in reputation; science will gain in valuable additions to our present store of medico-legal knowledge, and justice will more surely be meted to the guilty. The appointment of judge and medical officer should be made by the governor and council, and they should be removed only in consequence of incapacity, malfeasance, or by death.

ISAAC H. HAZELTON.

GRANTVILLE, MASS., *October* 6, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING SEPTEMBER 30, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	459	22.49	29.35
Philadelphia	825,594			22.24
Brooklyn .	506,233	168	17.24	24.92
Chicago . .	420,000	156	19.31	19.75
Boston . .	352,758	124	18.28	26.20
Providence	101,500			19.02
Worcester .	51,087	18	18.32	20.91
Lowell . .	51,639	24	24.17	20 55
Cambridge	49,670	22	23.03	23.31
Fall River	50,372	13	13.42	23.99
Lawrence .	36,240	11	15.78	25.96
Lynn . .	33,548	19	29.45	19.23
Springfield	32,000	16	26.00	20.93
Salem . .	26,344	9	17.76	22.92

Normal Death-Rate, 17 per 1000.

DR. H. R. STEDMAN and Dr. E. T. Williams have been appointed physicians to the Roxbury Dispensary connected with the Roxbury Charitable Society, in place of Dr. E. G. Morse and Dr. W. H. Emery.

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GASTRIC ULCER.[1]

BY JOHN G. BLAKE, M. D.

Ulcer of the stomach is defined as a disease characterized during life by pain in the stomach, and usually associated with vomiting, hæmorrhage, and disturbance of the digestion, and terminating either in cure or in death by hæmorrhage, perforation, or marasmus.

Pathological researches show its existence in about three per cent. of deaths from all causes, either as an open or partially cicatrized ulcer.

It is of two or three times as frequent occurrence among women as among men, and the tendency to perforation in women is in even still greater proportion. Derangement of the uterine functions is supposed to contribute to its production; and the fact that it seldom appears before puberty, is very often associated with amenorrhœa, and is more likely to occur about the climacteric period, lends support to this view.

Surgical writers agree in stating that gastric ulcer occurs often after extensive burns of the skin, but of this I have no personal knowledge, never having seen it in a hospital experience of thirteen years. Its seat is found to be most frequently on the posterior wall, and in the region of, rather than upon, the curvatures. The ulcers may vary in size from half an inch to six inches in diameter; as a general rule they are round or ovoid in shape.

The most successful treatment is rest, meanwhile supporting the system by nourishment introduced through other channels. Fortunately, the large intestine allows this to be done, and for sufficiently long periods when care is exercised in the selection and preparation of articles of nourishment. In addition to the ordinary substances used, as beef-tea or juice, strained oatmeal gruel, and white of egg, attention has within a few years been called to the value of minced fresh meat, thoroughly incorporated with the pancreas of freshly-killed pigs in the proportion of two parts of the former to one of the latter. In a case of intestinal obstruction now in the seventeenth week, recourse was had to this among other methods of sustaining the strength without loading the bowels above the obstruction. Our method of proceeding was to have

[1] Read before the Boston Society for Medical Observation, June 19, 1876.

a messenger waiting at Squire's slaughtering establishment, who received the pancreas and brought it without delay to the patient's residence. Here the physician, after removing the fat and selecting the true glandular substance, mixed it thoroughly with the finely-divided meat, and placed it, in the form of a soft sausage, as high in the rectum as was possible without inflicting pain. The result was highly satisfactory for a time. In from six to twelve hours the parts not absorbed came away in the form of a thick, creamy emulsion. Patient declared that he felt stronger, and derived more benefit from this than from an injection of beef-juice. After repeating it ten or twelve times, however, the intestine became sensitive and painful, and we were compelled to discontinue it. I have thought frequently of giving this method a fuller trial in cases of gastric ulcer. The chief objection lies in the difficulty of complying with all the conditions. The pancreas must be fresh; if more than two hours from the living animal its value is much impaired or lost. The pig should be killed after a full meal. It is also desirable to get the mass high up in the colon, and this is by no means easy of accomplishment.

My thanks are due Dr. Morrill Wyman for the suggestion of using this mode of treatment, though recently I have seen allusions to it in many of the journals.

Simple and effectual as these measures are in the treatment of gastric ulcer, and familiar as they are to all connected with hospitals, little if any allusion is made to them in the books.

The following cases, from the records of the City Hospital, illustrate the usual points in ulcer of the stomach very distinctly. All occurred in women. At present I recall no well-marked case of gastric ulcer occurring in a man.

Case I. Kate McD., aged twenty-three, seamstress, entered City Hospital February 10, 1875. Family consumptive. Two years ago had slight attack of hæmatemesis. Has gradually lost strength for the last five months. Had much pain in epigastrium, coming on sometimes immediately after eating, at others after an hour. Five days ago vomited a considerable quantity of blood at intervals during the day. At night the quantity of blood increased, and was accompanied by sharp, transitory pains in epigastrium. Hæmorrhage was relieved by cold applications to epigastrium, and ice internally.

Two days before entrance the patient vomited a large amount of bright-red blood mixed with clots. Hæmorrhage checked by means of cold externally and internally, with powdered alum and ergot.

Since, she has been free from pain. After entrance to hospital she vomited some clear mucus not mixed with blood. Injections, per rectum, of beef-tea, raw eggs, and brandy, every two hours, were ordered, alternate injections to contain twenty drops of tincture of opium.

February 12th.

℞ Bismuthi subnitratis . . . . . grs. xx.
Acidi Gallici . . . . . grs. v. M.
Give three times daily.
℞ Valentine's extract of beef . . . . . 3i.
Aquæ . . . . . 3x. M.

February 13th. Vomited small amount of blood last night. Ice-bags were applied over epigastrium, and ice was given internally. Also

℞ Ergotinæ . . . . . gr. i.
Morph. sulph. . . . . gr. ½. M.
Subcutaneously.

February 17th. Strained gruel was substituted for beef-tea in injections.

February 18th. Vomited, but no blood to-day.

February 20th. To have aromatic sulphuric acid.

February 21st. Omit medicine of the 12th.

℞ Mucilag. acaciæ . . . . . 3ij.
Bismuthi subnit. . . . . gr. v.
Morph. sulph. . . . . gr. 1-12. M.
Give every three or four hours.

February 22d. Patient is more feeble.

Champagne and milk, two drachms of each, were given every ten minutes. Valentine's meat juice and brandy have been given per rectum every hour since entrance. Slight swelling noticed over left parotid.

February 25th. Swelling increased in size, tender, and flushed. Camphor and ether, in equal parts, were applied over swelling.

February 27th. Omit camphor and ether, and apply a poultice of flaxseed over swelling. Right parotid also swollen.

March 5th. Abscess over left parotid opened. Considerable amount of pus discharged.

March 8th. Right parotid has been so swollen as to close eyes. Now the swelling is subsiding. General condition much improved. Takes one pint of milk by mouth every day.

℞ Valentine's meat-juice . . . . . 3i.
Spts. vini Gallici . . . . . 3ss.
Tinct. opii . . . . . gtt. v. M.
S. Inject per anum every hour while awake.

March 9th. Five grains of sulphate of quinine to be added to each injection. Also two raw eggs to be given by injection during the day. No more vomiting.

March 12th. Abscess in right parotid opened. Quantity of milk taken by mouth gradually increasing.

March 13th. Three loose dejections in twenty-four hours. Fifteen drops of tincture of opium, repeated as occasion requires, for diarrhœa.

March 23d. Is slowly improving. Suppuration continues in both parotids. Omit medicine.

℞ Morph. sulph. . . . . gr. 1½.
Bismuthi subnit. . . . . grs. xxx.
Mucilag. acaciæ . . . . . ʒiv. M.
Sig. ʒi. every four hours.

Give, per rectum, eight ounces of brandy twice a day, five grains of sulphate of quinine daily, and five drops of tincture of opium every hour.

April 3d. Omit injections. Give Valentine's meat-juice by mouth, and spts. vini Gallici, four ounces, per rectum.

April 21st. Discharged, relieved.[1]

Case II. E. H., domestic, aged twenty-two, entered January 18, 1876. Family history good. Never sick before. About two years ago had several attacks of vomiting, which often came on immediately after eating. Had some pain and tenderness in epigastrium, yet was comparatively strong and healthy until two months ago, when she vomited a large amount of blood for several days in succession.

Pain and tenderness increased in epigastrium, and became diffused over a considerable space. Patient has also sharp pain in interscapular region, and more or less constant pain in lumbar region, heats and chills, cold extremities, and other symptoms indicative of a state of anæmia. Has taken but small quantities of liquid food, and has vomited much of that. There is tenderness over whole abdomen, most marked at a point one and a half inches below the ensiform cartilage, which is the point where tenderness first appeared. Catamenia regular, but since hæmatemesis the flow lasts but a few hours. Injections of beef-tea, two ounces every four hours, ordered per rectum. Milk and lime-water, equal parts, one drachm occasionally by the mouth. Ten grains of subnitrate of bismuth.

January 20th. Epigastric pain prevents sleep. One fourth of a grain of sulphate of morphia in suppository, per vaginam, at night. Barley gruel, substituted for milk and lime-water, was temporarily increased to half an ounce, and caused vomiting.

January 22d. Slept pretty well. No more vomiting and less pain.

January 26th. Occasional pain in epigastrium. Increase barley gruel to three drachms every two hours.

January 29th. Increase barley gruel to half an ounce every two hours, and add one drachm of sherry wine to each dose.

February 1st. Give alternate injections consisting of the whites of two eggs well beaten, with whisky half an ounce, and milk to five ounces.

February 5th. Decrease bismuth to five grains every four hours. Patient has no pain and less tenderness.

[1] The profuse suppurative parotiditis called for stimulants in large amount, hence the quantity. The gastric ulcer did not need them, and it is not to be understood that they formed part of the treatment for it.

February 9th. Barley gruel changed for rice water, one ounce every two hours, to be increased to two ounces every two hours.

February 14th. Slight distress in epigastrium.

February 20th. Doing well. Omit barley gruel. Milk, with one third lime-water, one ounce to be given every two hours.

February 21st. Increase milk to ounce every hour.

February 26th. Ten drops of chloride of iron thrice daily.

March 3d. Milk gradually increased to two ounces and a half every hour, one sixth lime-water. Beef-tea in the same amount to be given every third dose.

March 7th. No pain or other gastric symptom. A piece of dry toast, two inches by two, ordered every three hours. Reduce injections to two daily.

March 13th. Patient has little desire for food, but is allowed small amounts of boiled rice. She vomited once to-day. There was no blood. Has taken a severe cold.

March 20th. The abdomen is tender, and swells after eating. Give *nothing* but milk.

March 24th. Ten grains of lactopeptin four times daily. Half a drachm of compound tincture of cardomom three times daily.

April 7th. Oysters for dinner.

April 10th. Food causes no distress. Rare steak for breakfast.

April 14th. Patient eats solid food in abundance, and has no pain or gastric disturbance. Decrease injections to two daily.

April 15th. Discharged, well.

Case III. K. H., aged twenty-six years, domestic, entered January 21, 1876. Father died of cancer. Patient was always healthy until two years ago, when, after some pain in epigastrium, she vomited blood. Pain and tenderness increased; she was unable to eat anything without great distress, which came on immediately after eating. Her health failed, and she went home to Ireland. In about four months the symptoms nearly disappeared. She was well until about one week before entrance, when she was attacked with sharp pain in the epigastrium and hypochondria, which continued until two days before entrance, when she vomited about one pint of blood. Since, she has vomited ingesta as soon as swallowed. Pain much increased in epigastrium. Has pain in interscapular and lumbar regions. The point of greatest tenderness is just below the ensiform cartilage. Patient well nourished.

Injections of beef-tea, two ounces every four hours, per rectum, were ordered, and barley gruel, one drachm, by the mouth, every two hours.

Ten grains of subnitrate of bismuth every two hours.

January 22d. Vomited at first one drachm of gruel, but not at all since. Amount increased to two drachms.

January 26th. No pain or vomiting.

January 28th. One fourth of a grain of sulphate of morphia in suppository, per vaginam.

Blister one by two inches over each hypochondrium. One drachm of sherry wine with each dose of gruel.

February 1st. Give alternate injections consisting of the whites of two eggs, beaten with half an ounce of whisky, and milk to five ounces. Sleeps well.

February 8th. Decrease bismuth to five grains every four hours. There is little pain, and slight tenderness in left hypochondrium. Gruel increased to half an ounce at a dose.

February 13th. Bowels obstinately constipated. Relieved by stimulating injection, after which several injections of gruel were not retained. Injections temporarily reduced to three ounces of beef-tea.

February 15th. Omit bismuth. Patient caught a severe cold.

February 16th. Vomited rice-water last night. Resume bismuth.

February 20th. Omit rice-water and gruel. Milk, with one third lime-water, one ounce every two hours by mouth.

February 29th. Alternate doses of barley gruel were ordered.

March 4th. Milk has been gradually increased to two ounces and a half every hour, and causes no trouble. Patient has improved in appearance.

March 14th. Allow small amount of well-cooked rice for dinner.

March 21st. Vomited once yesterday, and to-day has pain in epigastrium. No appetite. Reduce injections to three daily.

March 24th. Ten grains of lactopeptin four times daily. Stomach in better condition.

March 31st. Eats small amount of solid food.

April 10th. Has oysters for dinner, and they cause no trouble.

April 13th. Eats solid food freely, with no gastric disturbance. Injections reduced to two daily.

April 15th. Discharged, well.

Case IV. The patient had all the above symptoms in an aggravated form, and required the same general treatment, nourishment, chiefly per rectum, with the internal use of bismuth, gallic acid, and morphia. The case proved a very tedious one to treat successfully, and it was three months before the stomach could retain the simplest articles of diet. The patient left the hospital quite well.

Case V. is related chiefly on account of the peculiar circumstances connected with it. A woman, while quarreling with her husband, uttered a loud shriek, and was attacked with severe pain and sudden faintness. The neighbors, supposing that she had suffered violence at her husband's hands, had him arrested. In less than twenty-four hours the woman died. An autopsy, made by Dr. Bundy and myself, revealed of commencing general peritonitis, and the presence of about a

pint of a gruelly-looking fluid in the abdominal cavity. After searching in vain for a cause for the peritonitis we finally discovered a clean-cut perforation, about half an inch in diameter, in the posterior wall of the stomach, and in the centre of an ulcer three times as large. We afterwards learned that the woman had been a sufferer from dyspepsia for a long time.

The specimen is in the museum of the Boston Society for Medical Improvement.

A CASE OF FOREIGN BODY IN THE AIR-PASSAGES.

BY G. B. STEVENS, M. D., GLOUCESTER.

On August 14, 1876, Mrs. R., aged seventy-nine, after a dinner of baked beans, partaken of without inconvenience, took a small piece of cracker and a little tea. No sooner had an attempt been made at swallowing these than violent coughing and strangling followed, with the sensation of something passing down the right side of the throat and lodging in the chest beneath the right collar bone. After about fifteen minutes of great distress, vomiting took place with some relief, though severe coughing continued for more than two hours.

For the next five days there was a short, hacking cough, but no severe paroxysms. On the 19th, immediately after rising, a very severe fit of coughing began, during which something was felt to rise towards the throat, producing for a few moments an intense feeling of suffocation.

I first saw the patient at noon of the 19th. The severity of the morning's symptoms had then abated. There was a frequent, short, dry cough, produced, according to her sensations, by "a tickling in the throat." The voice was unaffected. There was no localized pain, though complaint was made of soreness over the whole chest. A physical examination showed the lungs to be in an emphysematous condition from disease of long standing, but gave no clew to the situation of the foreign body.

For the next eight days the patient was kept as comfortable as possible by opiates in small doses, at varying intervals, to allay irritation, though cough at times was severe, with slight muco-purulent expectoration. There was no localized pain, but the same general soreness of the chest as before. Repeated physical examinations disclosed nothing as to the presence of the foreign substance. The pulse varied from 90 to 96. There were no chills or feverishness.

At five o'clock on the morning of the 27th, after an exceptionally comfortable night, in a paroxysm of coughing of greater severity than either preceding one, and so violent that to the attendants suffocation seemed imminent, a small cooked bean, in two fragments, was ejected, since which time all symptoms of irritation in the air-passages have rapidly declined.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.

BY R. H. FITZ, M. D.

PATHOLOGY.

Inoculation of Cancer. — The successful inoculation of a medullary cancer is reported by Newinsky.[1] The tumor occurred in a dog, and portions of it were removed and placed beneath the skin of healthy dogs. Forty-two inoculations were made, twenty-seven of which took place in the inflamed skin of eight healthy grown dogs, and fifteen in the normal skin of six young dogs. In the first series of experiments no positive results took place, while in two of the six young dogs the inoculation was a complete success. In the one case, the wound healing by first intention, a small elevation hardly as large as a pea was present in the scar after two weeks.

An ulceration took place six weeks later, which continually increased in size. After five months the animal was killed, and in addition to the cancerous tumor of the skin, a metastatic nodule as large as a hazel-nut was found in an axillary lymph gland. In the second case the dog died after six weeks, and although there was no metastasis, the tumor at the place of inoculation was found to be a medullary cancer.

Transmission of Typhoid Fever. — A series of experiments have been made by Bahrdt,[2] in the same direction as those of Birch-Hirschfeld,[3] much larger quantities of the typhoid dejections being used. His results were negative, for neither by the introduction of typhoid excrement into the stomachs of the animals, nor by the confinement of them for many weeks on a soil impregnated with typhoid dejections, was he enabled to obtain symptoms or anatomical changes which could be regarded as peculiar to typhoid fever, or to produce a disease which bore even a resemblance to typhoid fever.

Grass-Green Sputum. — Rosenbach[4] describes the occurrence of a new kind of grass-green sputum of no probable diagnostic value, but worthy of consideration in connection with the more important sputum of a similar color to which Traube has called attention.

The patient from whom it came suffered from bronchial asthma, during the attacks of which the sputum presented the character of that described by Leyden, containing large numbers of the pointed octahedral crystals spoken of by him. At the outset the sputum was muco-purulent, and of a grayish white color; after standing twenty-four hours it

[1] Medicinisky Westnik, 1876, xxv.; St. Petersburger medicinische Wochenschrift, 1876, xxiv.; Allgemeine medicinische Central-Zeitung, 1876, lxxi. 875.

[2] Archiv der Heilkunde, 1876, xvii. 157.

[3] The Journal, April 23, 1874, page 400.

[4] Berliner klinische Wochenschrift, 1875, xlviii. 645.

became of a beautiful grass-green color. The fluid portion was colored, while the purulent collections presented a greenish tinge merely. When potash was added the green color became more intense. The microscope showed the presence of numerous active vibrios, greenish spores, and collections of minute, glistening granules, resembling clumps of spores. These clumps were circular, of varying size, and of a distinct greenish-yellow color; in their immediate vicinity the previously-mentioned greenish spores were more abundant. Acids, ether, and alcohol had no effect upon them. Small green granules were found in the mucus and pus-corpuscles, also in the epithelium, and remained after the destruction of the cells by reagents. The color thus apparently originates from the spores, and is limited to the homogeneous, serous fluid. A few drops of this fluid added to the muco-purulent sputum of a tuberculous patient produced in it a slight green color; when added to milk a greenish crust was formed on the surface after twelve hours; in both cases a development of spores taking place, the crust being composed of them.

Bilirubin in Infants. — After calling attention to the various observations already made concerning the occurrence of a crystalline pigment in children recently born, Orth [1] states that in less than a year and a half he has found this condition in thirty-seven infants.

In all cases it was present in the kidneys, in twenty-six cases in the blood, and in small amounts in the other organs. The shape of these crystals corresponds with that already recorded: short, broad, and thick rhombic plates or columns, and long narrow needles united into clumps. The former were decidedly brown, the latter of a yellowish-red color. In the blood the needles were found almost exclusively, while in the kidneys they were associated with the plates and columns; elsewhere all three forms were present, though the needles predominated.

The crystals were most abundant in the kidneys towards the apices of the Malpighian pyramids. While in the cortical portion a diffuse yellow color was present, or yellow masses in the tubules with or without the crystals were observed. In twenty-six of the cases the pigment was associated with the so-called uric-acid infarction.

Previous observers have differed as to the nature of the pigment observed by them, some regarding it as bilirubin or biliary coloring matter, others as hæmatoidine, or blood crystals.

The fact that in all but five of the cases jaundice was present shows that the formation of the pigment stands in close relation with the jaundice. This view is strengthened by the observation that in no carefully examined case of icterus neonatorum were the crystals absent. In one of these five cases jaundice had been present a few days before death, and it seems not unlikely that this condition may have been earlier

[1] Virchow's Archiv, 1875, lxiii. 447.

present in the remaining cases, and that the crystals occur only in the presence of existing jaundice, or of recent jaundice disappearing. This view is further favored by the chemical reaction of the crystals, which corresponds with that of biliary coloring matter. Orth considers that the jaundice itself is the sole cause of the deposition of the pigment, and that the latter is the biliary coloring matter previously dissolved in the blood, whether the same was present there through absorption or local formation.

The constant presence of these bilirubin crystals in icterus neonatorum is all the more interesting as they do not occur in jaundice of the adult. In examining an extensive series of severe cases of jaundice the crystals were never found in the blood. Diffuse biliary coloring matter and granular pigment were frequently seen in the kidneys, though in small amounts, while the bilirubin crystals were found only very exceptionally. In those cases where bile pigment has been found extensively deposited in the kidneys, the jaundice is chronic and extreme, while in sucklings the crystals were found where the skin became jaundiced only twenty-four hours before death. In the adult the pigment is deposited during life, while in the infant it is probable that the crystallization takes place after death. In two cases of acute yellow atrophy, examined after attention had been called to these crystals, they were found in various parts of the body, and other observers have previously found them in the same disease.

The Origin of Vesical Catarrh.—Dubelt[1] has endeavored to ascertain by means of experiments upon dogs, the relation of a vesical catarrh to various irritants, as the catheter, air and its bacteria, decomposed blood and urine, and the external application of iodine. He also took into consideration those forms regarded as due to a disturbance of the circulation, and finally those supposed to result from a disturbed innervation.

In the experiments with the catheter, the effort was made to determine how far the results depended upon the simple mechanical irritation, and how far upon the introduction of air and bacteria with the subsequent decomposition of the urine.

When the carefully disinfected catheter was introduced twice daily the urine soon became neutral, and contained pus, bacteria, and triple-phosphates. When air was injected after the bladder was emptied, there was no material difference in the results, though the quantity of bacteria was decidedly increased. The vesical catarrh is aggravated by the inflammation of the urethra, readily produced in dogs on account of the difficulty in introducing the catheter.

The injection of air, cleansed or not, produced no disturbance, though a decided increase in the number of bacteria in the urine resulted from

[1] Archiv für experimentelle Pathologie und Pharmakologie, 1876, v. 195.

the injection of ordinary air. The introduction of putrid water produced abundant bacteria, but neither alkaline urine nor an elevation of temperature.

Putrid blood produced a slight catarrh, which was apparently not due to bacteria.

A slight injury to the interior of the bladder by a trocar was followed by a catarrh, and the urine became alkaline before bacteria were present. When, after injury to the vesical mucous membrane, putrid material was introduced, the cystitis became much more severe, and the same result followed the introduction of decomposed urine into a healthy or a diseased bladder.

The application of iodine to the outer surface of the bladder produced merely a slight catarrh.

A disturbance of the circulation and innervation was produced by increasing and diminishing the intra-vesical pressure, by the retention of urine in a healthy and a paralyzed bladder, by the introduction of a catheter into a paralyzed bladder, and by irritation of the spinal cord.

It was found that the healthy and the paralyzed bladder became anæmic after retention not associated with urethritis, and contained little or no pus. When the urine was drawn from a paralyzed bladder a cystitis resulted.

It was also concluded that a neuroparalytic hyperæmia in a paralyzed bladder gives no occasion for a vesical catarrh, and that trophic disturbances may produce vesical catarrh without the aid of other agencies.

Diagnosis of Progressive Pernicious Anæmia. — According to the investigations of Eichhorst,[1] an absolutely certain diagnosis may be made in the earlier stages of this disease. This is to be done by a microscopical examination of the blood, for the affection may be concisely designated as a disease of the red blood corpuscles, and is as easily recognized as leucæmia. While a portion of the red blood corpuscles are of normal size, and peculiar only from their striking paleness and but a slight tendency to become crenated and to form rolls, others are conspicuous from their small size, being often hardly a fourth of the diameter of the fully formed corpuscle. The color of the latter is darker, and the biconcave appearance is lacking or nearly so. Some of them are so minute as to appear like small red fat drops. Many hundred examinations of the blood of healthy and otherwise diseased persons were made, but similar changes were never found. It was further noticed that as the disease progressed the greater was the number of the described elements, in one instance equaling that of the relatively intact blood corpuscles. The white corpuscles were decidedly diminished in number.

[1] Centralblatt für die medicinischen Wissenschaften, 1876, xxvi. 465.

NEW WORKS ON OBSTETRICS.

THREE new works on obstetrics have been recently published. The first[1] of these is written by Dr. Playfair, the professor of obstetrics in King's College (London), and is not only an excellent epitome of the science and practice of obstetrics, but one which presents to the student most of the recent advances in that branch of medical knowledge. In some respects it may be thought that the writer has stated as facts theories which are still *sub judice*, and has advocated methods of practice about which there is still much question in the minds of many whose reputation is equal to that of Professor Playfair. To our own mind, however, such criticism adds a great value to the work. It has too long been the custom of writers on obstetrics merely to reproduce in some new form the old, stereotyped thoughts of others, the addition of very little new material being considered all that was necessary to warrant the writer's claim to the authorship of the volume. Dr. Playfair, however, makes a new departure, and his work is therefore all the more valuable.

The book is divided into five parts: anatomy and physiology of parturition, pregnancy, labor, obstetric operations, and the puerperal state. In the first two parts the author gives, besides the usual facts to be found in all works on obstetrics, a detailed account of the physiology of menstruation and its relation to ovulation, and then considers the various theories that have recently been proposed as to the true structure of the placenta. As regards the value of the so-called corpus luteum as an infallible sign of pregnancy, he states that the differences between the "true" and the "false" corpora lutea are of degree only, and that obstetricians do not now attach the same importance as formerly to appearances of the corpora lutea in the ovary as a sure sign of pregnancy, for even when well marked there are other more reliable signs of a previous impregnation. We cannot quite agree with Dr. Playfair in the confidence with which he advises a puncture with the aspirator in all cases of suspected extra-uterine pregnancy.

In the third part of the book the writer describes with great minuteness, and in a most admirable manner, the treatment of a normal case of labor. He advises the administration of a drachm of the fluid extract of ergot after delivery, in every case, with a view not only of guarding against hæmorrhage, but as a measure tending to lessen, if not entirely prevent, after-pains. He also favors the use of the hydrate of chloral as an anæsthetic in labor, and speaks in the highest terms of its value. His method of using it is to administer fifteen grains every twenty minutes until three doses have been given. The patient often requires but two, and no injurious effects have ever been observed to follow its use.

In the part of the work devoted to obstetric operations, one is at once struck with the freedom with which Dr. Playfair recommends the use of the forceps. The instrument he advises is the long, curved one, and he advocates in many cases a very early interference. The only caution he gives as to their use is in cases where the head is very high up, or the os not yet fully dilated. In

[1] *A Treatise on the Science and Practice of Midwifery.* By W. S. PLAYFAIR, M. D., F. R. C. P. Philadelphia: Henry C. Lea. 1876.

his treatment of ante-partum hæmorrhage we must take exception to his advice as to the use of ergot before the os is dilated. We can but think that this direction is given carelessly, inasmuch as, only a few pages before, Dr. Playfair has especially cautioned physicians against ever using this drug until the os is fully dilated. As regards version, too little stress seems to be laid on the advantages to be derived from the external method of performing the operation, and the author gives to Dr. Hicks the whole credit of first proposing the so-called bi-manual method of operating, which was unquestionably first described by Dr. Wright, of Cincinnati, at least six years previous to the date of Dr. Hicks's advocacy of it. As regards the puerperal state the writer has treated the subject in a most able manner, embodying in the text all the recent advances made in this branch of the subject.

The book abounds in illustrations, although many of them are of very inferior merit, as, for example, Figures 99 and 151, and others are absolutely wrong, as the position of the forceps in Figures 152 and 153 and the cephalotribe in 165. The typography of the work, however, is excellent, and the fullness of the index and the table of contents adds greatly to the value of the book.

In the work of Dr. Winckel[1] the student who desires to pursue the study of obstetrics beyond the limit usually required of graduates will find a most valuable treatise on the various diseases incident to the puerperal state. The author (formerly the professor and director of the gynæcological clinic at Rostock) has treated at great length and with a thorough knowledge of the subject many of those diseases which not unfrequently complicate the puerperal condition, but which, owing to a lack of room, are usually either entirely omitted or only too briefly alluded to in the common text-books on obstetrics. The work is essentially clinical in its nature, the author citing a large number of cases by way of illustration, and is rich in matter of historical and statistical value. The bibliographical references, which follow the discussion of each subject, are invaluable to the student of this special branch of medicine.

The translation of the work is admirably done by Dr. Chadwick, and the general typographical appearance of the book is excellent.

The work of Dr. Meadows[2] is one with which we are somewhat disappointed. His original work was considered at the time of its publication to fairly represent the condition of obstetrical knowledge. This new edition, however, falls far short of the requirements of the present day. Very little notice is given to the advantages of external version, and the advice given to either bleed to syncope a patient before attempting version in cases where the liquor amnii had escaped, the uterus was firmly contracted, and the os undilated, hard, and unyielding, or to try chloroform, as though there was no choice between these two methods of procedure, seems to us open to grave criticism.

In describing the operation of craniotomy, no mention whatever is made of the trephine so extensively used in Germany at the present time, and the cranioclast finds mention only in an illustration.

[1] *The Pathology and Treatment of Childbed.* By Dr. F. Winckel. Translated from the Second German Edition by James R. Chadwick, M. D. Philadelphia: Henry C. Lea. 1876.

[2] *A Manual of Midwifery.* By Alfred Meadows, M. D. Lond., F. R. C. P. Second American from the Third London Edition. Philadelphia: Lindsay and Blakiston. 1876.

The treatment of puerperal diseases is to our mind unsatisfactory, the writer giving many theories without endeavoring to assist the student in making up his mind as to which one it is toward which the weight of evidence is at present tending. We wonder also at the omission of quinine from the list of remedial agents to be employed in the treatment of some of these affections. The management of the placenta after delivery is in marked contrast with that given in Dr. Playfair's book, to which we have just alluded, nor are we yet willing to admit the superiority of the straight over the curved forceps. It seems to us a matter of regret that if a new edition was called for, more attention had not been given to its preparation.

CARTER ON DISEASES OF THE EYE.[1]

THE original edition of Mr. Carter's book was noticed not very long ago in the pages of the JOURNAL. In the present edition the notes of the American editor are generally brief, but, correcting as they do a number of inaccuracies or errors, or serving to supplement the statements of the author, they form a valuable addition to the work. We have only to complain that the American notes are not more frequent. A few passages of the original, disconnected from the immediate subject-matter or devoid of interest to American readers, have been omitted, and several illustrations added. A sheet of test-types, constructed on Snellen's principle, is appended. The type and paper do not equal that of the English edition.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

O. W. DOE, M. D., SECRETARY.

JUNE 19, 1876. *Treatment of Gastric Ulcer.* — DR. J. G. BLAKE read a paper upon this subject, which we print elsewhere.

DR. CHADWICK asked if any special diet was better than others in the majority of cases.

DR. BLAKE said he had found generally that farinaceous diet, such as rice-water or barley gruel, was best borne, and that raw beef had been found very beneficial.

DR. H. I. BOWDITCH remarked that in cases in his own practice he had found soft, stale bread in milk to be retained when nothing else would. If constipation resulted, it might be corrected by the use of bismuth and rhubarb. He usually began with a very small quantity of milk, not more than a teaspoonful, and gradually increased it. Often the slightest deviation from this form of nourishment would cause the vomiting to return. He thought this treatment should be continued for a long time. One patient under his care had lived on this diet almost exclusively for weeks.

DR. EDES asked Dr. Blake if he had ever used the pancreatic mass in gastric ulcer.

[1] *A Practical Treatise on Diseases of the Eye.* By ROBERT BRUDENELL CARTER. Edited, with Additions and Test-Types, by JOHN GREEN, M. D. Philadelphia: H. C. Lea. 1876.

Dr. Blake said he had not, but thought it advisable to try it.

Dr. Hildreth referred to the solvent action of fresh pancreas in the digestion of beef-tea. In two cases of gastric ulcer, in each of which enemata of beef-tea with fresh pancreas had been given, the discharges were of a yellowish color. Dr. Hildreth thought the injection might be more effectually given by attaching to the syringe a glass stem connected with a moderately long rubber tube.

Dr. Blake said he had recently administered fresh pancreas mixed with minced beef per rectum, at the suggestion of Dr. Morrill Wyman, who had given it with great benefit to the late Professor Agassiz.

Dr. Hildreth remarked that he had treated a lady with beef-tea enemata, who had previously had the same with fresh pancreas added to it, and she had noticed no difference whatever in the effects produced.

Dr. Brown suggested the possibility of sarcinæ ventriculi being present in cases of gastric ulcer, as he remembered finding them in one case under Dr. Bowditch's care at the Massachusetts General Hospital.

Cerebral Sclerosis. — Dr. Webber showed a specimen of cerebral sclerosis, and gave in brief the following history of the case, which had been under the care of Drs. Tyler and Langmaid. The patient, a lady, had been ill about three years, suffering from an excessively irregular action of the limbs on attempting to move, the movements at first being chiefly unilateral. Towards the close of her illness there was considerable enfeeblement of the mental powers, and a certain silliness, with loss of comprehension of the proper relations of thought.

At the autopsy there were apparent several spots of sclerosis in the white substance of the hemispheres, medulla, pons, and cerebellum, varying from the size of a small pin's head to three eighths of an inch in diameter. On the right side these spots were by far the most numerous, and on the right side also the corpus striatum and the corpus dentatum of the cerebellum were affected. The preponderance of lesion on the right side explained the unilateral character of the earlier symptoms. The gray substance was affected only where the sclerosis, which began in the white, lapped over into the gray substance.

Dr. Lincoln mentioned the case of a patient twenty-two years of age, who since her earliest remembrance had suffered from a disease similar to that described by Dr. Webber, though she could write and speak, and she retained her senses.

Dr. Lincoln asked if such cases were usually of long duration.

Dr. Webber replied that cases of spinal sclerosis are of long duration, sometimes continuing for twenty years; one case lasted twenty-seven years. Cerebral sclerosis is much shorter in its duration, where both the spine and cerebrum are affected. The disease continues a longer or shorter time according to the parts involved. Dr. Webber thought Dr. Lincoln's case was probably one of spinal sclerosis.

Epithelial Cast from the Œsophagus. — Dr. Lincoln reported the case of a boy aged nine years, who vomited an epithelial cast of the lining of the œsophagus. The boy had not been dyspeptic. On May 24th he had an attack of catarrh of the fauces and right Eustachian tube, which subsided in a few days

without doing mischief. On May 29th he was attacked by pains in the right great toe and ankle, and in the left knee, which he said were like those he had suffered last year in a long and severe attack of articular rheumatism. The fever was not high. Salicylic acid in three-grain pills was given every hour, and on the 31st, in the morning, having taken thirty-one of these pills, his pains had entirely left him. But at eleven A. M. he began to bleed at the nose a little; in five minutes or so he vomited a gill or two of blood, dark, with some clots, and a very little food, containing a clot seven inches long, of the size of the boy's finger, in close union with which was a cylindrical substance, remind ing one of a croupy false membrane; the cylinder was complete in some parts, torn in others. The vomiting and nosebleed were easily arrested; there was no further systemic or local disturbance of any sort, and the boy is now very well.

The only local complaint during the use of the salicylic acid was that of a dull feeling of pressure in the stomach.

There is and has been since last year a loud apex murmur with the first beat of the heart.

DR. FITZ described the specimen as consisting of the desquamated superficial layer of the œsophagus, the blood clot being closely entangled with it. There was none of the papillary layer present, so that no ulcerated surface remained behind.

Fibro-Muscular Tumor of the Prostate. — DR. BUNDY showed a specimen of fibro-muscular tumor of the middle lobe of the prostate. The patient was seventy-seven years of age, and fifteen years ago was told that he had an enlarged prostate. During the past three years his urine had at times contained blood. Ten weeks before death he began to be troubled with frequent desire to pass water, attended with pain and dribbling of urine. Dr. Bundy saw the patient five weeks ago for the first time, when he drew off two quarts and a half of urine. The patient then stated that he had noticed his bladder to be abnormally distended for some weeks before. At first the catheter was required only twice or three times a day, but during the last week of life as often as every four hours.

DR. BUNDY showed another specimen, taken from a patient three years ago, where the lateral lobes were enlarged instead of the middle one.

DR. BLAKE asked if there was much trouble in passing the catheter.

DR. BUNDY replied that there was during the last few days of life only, and added that the tumor was so attached to the bladder by a short, thick pedicle, as to act as a partial valve to the urethra.

AMERICAN MEDICAL JOURNALISM.

WE have read with great interest the article on Literature and Institutions by Dr. John S. Billings, which appeared in the October number of the *American Journal of the Medical Sciences* under the head of A Century of American Medicine. The article is fair and well written, and will fully repay a most careful perusal. It is remarkable for the utter absence of "spread-eagleism" and glorification. Indeed, it somewhat tends to the opposite extreme, for if, as the writer asserts, some of our journals compare favorably with the

best of other countries, we have good reason, considering the difficulties in our way, to be proud of it. Let us quote some of the facts. "At the beginning of 1876 there were in course of publication throughout the world about two hundred and eighty regular medical journals. Of this number Germany and Austria had fifty-seven; France fifty-two; Great Britain, not including her colonies, twenty-nine; the United States forty-six; Italy thirty-one; Belgium eight; Mexico eight; Canada seven; Holland six; Spain six. As to the form of publication, the United States has the largest proportion of monthlies, and France and Germany of weeklies and bi-weeklies." We certainly are somewhat surprised at these figures, and in one respect pleased by them. We have always believed, and we do still, that we publish in this country too many medical journals, but this list shows that the same criticism may be made of several if not of all other countries. If little Italy publishes thirty-one, forty-six for the United States does not seem out of proportion. Great Britain proper publishes only twenty-nine, and of these many are on special branches. The table is deficient, inasmuch as it does not show what proportion of the journals are of this nature, and how many may be called omnivorous. If these facts were given, the great distinction between our journalism and that of Great Britain would be evident, as would be also the cause of our general inferiority. It would be shown that we have not only to throw away but also to add. It would be an immense gain if the medical journalism of our whole country could be compressed into not more than half a dozen weeklies, as many quarterlies and monthlies together, and perhaps as many journals on special branches of medicine and the allied sciences. One of our greatest curses is that every community feels that it must have its own little chanticleer to ring its praises. For example, look at our universities. What glorious monuments of our civilization we should see in Harvard, Yale, and perhaps one or two other colleges if the sums that petty vanity had given, with the donor's precious name, to tenth-rate universities had been concentrated on them. Many of our medical journals are, as Dr. Billings justly says, "mainly devoted to advocating the interests of a school, and the attacking rival institutions, and are, to use Carlyle's phrase, 'windmills put out to catch or take advantage of the wind of popular favor.' These journals sometimes contain valuable reports of cases obtained from the college clinics, but the personal editorial element in them is usually in excess, and they are of interest to but a small local circle. To them applies the untranslatable French criticism, 'Il y a trop de tintamarre la dedans, trop de brouillamini.'"

The great class of the disappointed and the discontented occasionally furnishes some enterprising individual who edits a journal solely for attacking his enemies, in other words those more successful than himself. Of this class was the "*Rush Light*, published in New York in 1800, by William Cobbett, under the pseudonym of Peter Porcupine, for the vilification of Dr. Benjamin Rush. Seven numbers were issued, of which only the first two bore the imprint of place of publication; the last two were printed in London, and a complete set is very rare." We have been blessed with a similar publication, now defunct, in Boston; but this style of journal is short-lived, and usually expensive to its managers.

This leads us to another branch of the subject; journalism, medical or secular, is an expensive affair; very few of our medical periodicals pay their way, still fewer are remunerative. Most lead an uncertain life of penury and die of starvation. The reader may be inclined to say, "Let them die;" as far as the journal itself is concerned, we say, "Amen," but unfortunately few journals can die without loss to the profession, for there are few so poor that they have not contained one or two excellent articles which must perish with them. This is one of the greatest misfortunes resulting from the system. When a journal disappears, all that it contains goes with it; hence the desirability of a few vigorous journals. One interesting fact which may be gathered from Dr. Billings's paper, though he fails to draw attention to it, is that two medical journals in this country have flourished for a much longer period than any other. One is the revered journal in which his article appears, which assumed its present name in 1827 and consequently dates from that year. It is a continuation of the *Philadelphia Journal of the Medical and Physical Sciences*, which started in 1820. In 1829 it received the subscription list of the *American Medical Recorder*, a quarterly which appeared in 1818. The other journal is the one we have the honor to edit. It dates from 1828, when it was formed by the consolidation of a quarterly, the *New England Journal of Medicine and Surgery*, which began in 1812, with the *Boston Medical Intelligencer*.

MEDICAL NOTES.

— The 29th of this month will be "hospital Sunday" in Boston. We have tried to think well of this charity, but the way in which it has been administered does not encourage us to do so. The managers will do well to look sharply to the way in which the proceeds are divided, if they would not have it fall into disrepute.

— The *Medical Times and Gazette* of July 1, 1876, gives an account of the frequent and intentional production of prolapsus ani among the recruits in Galicia, in order that they may escape military service. The population of Galicia contains a large proportion of Jews, and the recruits from among them undergo a variety of self-inflicted injuries under the instruction of individuals who almost make an occupation of teaching them. Chief among these is prolapsus ani, for which two hundred and eighty-three recruits were rejected in Galicia in 1872, the entire number rejected for the whole Austrian empire being four hundred and twenty. Thus sixty-seven per cent., or more than two thirds, of the cases occurred in Galicia. In several of the districts there were not any cases. The numbers in Galicia are on the increase, there having been two hundred and forty-three rejections in 1871, and two hundred and eighty-three in 1872, and these do not represent all the cases, as other recruits were sent to the hospitals for treatment. Prolapsus ani being met with ordinarily as a temporary disease of childhood, or as a secondary consequence of other disease in old age, it may well be asked how it comes to occur in strong young men from twenty to twenty-three years of age, so that among several thousand recruits several hundred have to be exempted on account of disease. There can be no doubt that in the vast majority of cases it is

purposely produced. This is supposed to be effected by the introduction of sponges and by their forcible removal when distended with fluids, the proceeding being frequently repeated; but in none of the cases has this actually been proved to have occurred. As regards treatment of the disease, it has been found that when the affection has existed a year or more, and has become complicated with venous hæmorrhage, all curative measures having the object of compelling the recruit to serve have been of no avail. In more recent cases, when no important changes in the parts have occurred, the patients can frequently be efficaciously treated. Bandages and similar appliances are useless, and the object must be to render the voluntary reproduction of the prolapsus after it has been returned as painful as possible. The best mode of effecting this end is to pencil (under chloroform) the mouth of the anus with fuming nitric acid. The eschar falls off in from four to twelve days, leaving a simple granulating sore. Five out of six cases so treated by Dr. von Fillenbaum were cured, no ill consequence ensuing.

— *The Lancet* states that ever since Maximilian, Emperor of Mexico, closed his brief reign nine years ago, when he was shot by command of the late President Juarez, the ex-Empress Carlotta has been a prey to acute melancholia, the paroxysms of which were at first followed by intervals of partial return to reason. In these she was allowed to amuse herself in writing the experiences of her husband and herself in their few months' sojourn in Mexico. This she has long abandoned, and in the château of Laeken, where she is under strict medical surveillance, she has relapsed into confirmed dementia, which her physicians have given up all hope of curing. As in similar cases, she recurs to the predilections of childhood, one of which was a passion for flowers, and she spends most of her time over them, feeding as they do her once lively but now diseased imagination. Their attraction for her was touchingly manifested a short time ago. Eluding the watch of her attendants, she fled from the castle, but when overtaken it was found impossible to induce her to return, except by the use of means which would certainly have proved hurtful. One of her physicians bethought himself of her morbid affection for flowers, and by strewing them from time to time before her she was gradually lured on her way back to the château, where a closer surveillance has since been placed over her.

— At a recent meeting of the Association Française, as reported in the *Lyon Médical* of September 10, 1876, M. Gallard called attention to some changes in the mucous membrane of the stomach, hitherto but little known. He had had under his care two cases of hæmatemesis accompanied by melæna, but not having symptoms which could be associated with any disease of the stomach. The diagnosis was uncertain. In the first case the autopsy showed upon the mucous membrane of the stomach a very small ulceration appended to an arteriole; it was a miliary aneurism. In the second case there were found other points of a similar ulceration and similar dilatation, due to miliary aneurisms. He recalled the fact that M. Liouville has accurately described these aneurisms, but no one had previously intimated their rupture to be a cause of hæmatemesis. M. Gallard also exhibited a case of diabetic ulceration of the stomach. He believed that the name of ulcer of the stomach was given to a great number of lesions differing in their origin, physiology, and pathology, which ought to be separated by a careful classification.

M. Liouville said that the miliary aneurisms to which M. Gallard referred were found enough often in the principal viscera, but that their discovery was sometimes very difficult by reason of their small volume and ofttimes their situation.

M. de Valcourt said that once after a violent exertion, he had felt a sharp pain in the upper part of the chest; then hæmoptysis followed, the only one he had ever had. He asked whether it had not been caused by the rupture of one of these aneurisms.

M. Laussedat remarked that hæmatemeses are not always so grave in consequences as is generally believed. He cited cases where they had been abundant for eight days; but that since then no unfavorable symptoms had occurred in the patients, and their health was all that could be desired.

M. Delore spoke of an infant who had died from enterorrhagia and in whom at the autopsy there were found deep ulcerations proceeding even to perforation. He considered the lesion to be due to the irritant action of the gastric juice; accordingly, in such cases he gives infants Vichy water, to neutralize its acid principle. Perhaps such lesions are found among adults arising from the same cause.

M. Galezowski has observed, with M. Liouville, some cases of miliary aneurisms of the arterioles of the retina; these aneurisms are easily recognized with the aid of the ophthalmoscope.

— Dr. Solari, of Marseilles, says the *Medical Examiner*, recommends the chloral plaster as an excellent application in cases of neuralgia and of nervous pains resulting from exposure to cold. The plaster is easily prepared by powdering the chloral over a common pitch plaster, one to two scruples of chloral for every four square inches of the plaster. Care is taken not to incorporate the chloral with the pitch. It is applied for twenty-four to forty-eight hours; when removed, the skin is found covered by a number of small vesicles; these are opened and the part then covered with a cerate dressing. Generally speaking, it will be found that the pain has disappeared before the vesicles heal. Dr. Solari states that numerous cases of lumbago, intercostal and other forms of neuralgia, etc., have been rapidly cured by this simple method.

— M. Péan has recently presented to the Académie de Médecine two patients on whom he has performed the operation of splenotomy with success. One of the cases was operated on in 1867, and the second has just recovered. The details of the case, as given in *The Lancet* of August 26, 1876, are of great interest. The patient was a married woman, aged twenty-four years. A history of miscarriages and dead children was strongly suggestive of a syphilitic taint. A splenic tumor, observed to be steadily increasing for eighteen months, in February last filled almost the whole abdominal cavity; it extended to the pelvis, and even to the right iliac fossa. Various symptoms, apparently secondary to the tumor, distressed her, and the abdominal pain was constant. The patient implored an operation, which was performed on the 25th of April. An incision was made along the linea alba from three inches above the umbilicus to two and a half inches above the pubes, and a corresponding incision was made through the peritoneum. The omentum, which covered the tumor, was removed from below upwards, and was pushed beneath

the right hypochondrium, and both it and the intestines were kept back by sponges and warm napkins. The tumor had the characteristic reddish-violet color of the spleen. It was seized at its lower extremity and gradually raised within the lips of the wound, until it rested on the hands of the assistants, who were keeping back the intestines. No other organ escaped. The gastro-splenic omentum was about three fourths of an inch wide at the level of the hilus; it contained blood-vessels and enormous lymphatics. One splenic vein was the size of the index finger. A wire ligature was passed round the whole pedicle, care being taken to avoid the pancreas. The pedicle was then surrounded by sponges, and the spleen separated at the hilus by a single cut, being at the same time turned quickly outward. About a quart of blood escaped in a jet from the spleen, but none fell into the abdomen; otherwise not more than thirty grammes of blood were estimated to be lost. No adhesions were met with. The sponges were removed, the great omentum spread out over the intestines, and the abdomen closed, the pedicle being retained between the lips of the wound. The progress of the patient was excellent. The febrile reaction was slight. Some blood appeared in the urine on the third day, but diminished and disappeared a few days later. The pedicle separated in a week. Eighteen days after the operation the patient sat up, and a week afterwards returned home.

— Mr. Bumble and the "gentleman in the white waistcoat" do not appear to be dead, if we may judge by the following quotation from the *Lancet:* "Last week we pointed out that a new workhouse pharmacopœia was likely to be wanted. This week we have evidence that outside paupers are likely to be treated in the same way, and have medicines prescribed for them, not according to their fitness, but according to their cheapness. A most daring and discreditable resolution has been passed by the guardians of Horsham. It is so contrary to the more enlightened treatment of sick pauperism which has obtained of late years, that we must give it in full: 'That notice be given to the medical officers that after the present quarter no payment will be made by the guardians on account of expensive medicines.' Two or three guardians protested. Mr. Hunt said, If expensive medicines are wanted for the rich, they must also be wanted at times for the poor. Mr. Moses said, If these medicines are necessary — and the doctors are the best judges — we ought to give them. But protests were unavailing, and the motion was put and carried. We have heard of one law for the rich, and another for the poor; but it is strange at this time of day to have certain medicines for the rich and others for the poor. The spirit shown in this resolution is rapidly producing a distrust of the new doctrines of pauperism. Can anything be more revolting than to deny the poor remedies because they are expensive? It is to say that a pauper's pain shall not have the benefit of opium, that his ague shall not have the advantage of quinine, and that his consumption shall not be stayed by cod-liver oil. If this is political economy, the less we have of it the better. We cannot believe that the Horsham guardians, on reflection, will allow such a resolution to continue to disgrace their minute-book. Medicine is not an article to be haggled about. The most important medicines are dear. To withhold them is cruel. To expect the doctors to pay for them out of their scanty salaries is a meanness that is out of date."

BOSTON CITY HOSPITAL.

SURGICAL CASE OF DR. HOMANS.

REPORTED BY GEORGE W. GAY, M. D.

False Anchylosis of Knee-Joint; Forcible Movements followed by Hæmorrhage; Ligature of the Femoral Artery; Recovery. — M. a boy aged fourteen, entered the hospital May 20, 1876, under care of Dr. Homans. He was suffering from an acute attack of synovitis in the right knee, of a week's duration. Heat, pain, and effusion were present. The joint had been stiff eight or nine years.

The acute symptoms all disappeared under treatment, and efforts were made on the 26th of June to remedy the anchylosis. The boy was etherized and the leg flexed and extended with moderate force, and secured upon a ham splint.

Great swelling and pain immediately followed the operation. The constitutional disturbance was marked. This state of things persisted until the 4th of July, eight days, when fluctuation was detected in the calf of the leg. Pus having been found with the aspirator, a free incision was made, and a large amount of pus and clotted blood was turned out. The incision was three inches long, and situated over the inner border of the large muscles of the calf of the leg, midway between the knee and ankle. Both tibials pulsated. Soon after the cavity was emptied, bright arterial blood began to flow from the wound in distinct waves. This hæmorrhage continued throughout the day, in spite of the ordinary measures taken to control it, and in the evening Dr. Homans tied the femoral artery in the apex of Scarpa's triangle. A moderate oozing of blood from the wound in the calf was afterwards stopped with ferric alum and a bandage.

The ligature came away on the sixteenth day, July 20th, and the wounds were all healed and the boy discharged from the hospital September 9th. The leg was flexed at a right angle, and was slightly movable at the knee-joint.

The most important point to be determined in this interesting case is the origin of the hæmorrhage. Was there a rupture of the popliteal artery? It would seem that this vessel must have been wounded, or some of the larger articular branches severed near the main trunk, for the following reasons: —

Within a few hours after the operation there was enormous swelling of the whole limb, but especially prominent about the knee and ham.

At the same time the pain became so severe that the splint and bandage had to be removed.

Marked constitutional disturbances — a quick, feeble pulse, chills, hot skin, etc. — became speedily developed, and persisted.

A strong, pulsating current of arterial blood flowed from the wound when the clots were removed. The current was so strong that it could not be controlled by compresses and firm bandaging.

The fact that there was pulsation in the tibial arteries before the femoral was ligated may be explained by the supposition that the wound in the popliteal was small, and the coagulated blood confined by the dense fascia of the popliteal space served to prevent the free hæmorrhage that must otherwise have taken place during those eight days following the forcible extension.

It seems rational to suppose that the popliteal artery was imbedded in the inflammatory products resulting from the previous attacks of acute joint inflammation, its normal elasticity destroyed, as well as its usual freedom in the sheath. Hence, when these parts were put on the stretch, the vessel gave way, and the blood flowed from the rent as fast as the state of the clots and adjacent tissues would allow, until, having reached the calf of the leg, its presence was more clearly shown, and the proper means taken to check it. In no other way can the symptoms be explained.

Arteries, more especially the axillary, have occasionally been ruptured in the efforts to reduce old dislocations, but such an accident under the above circumstances is fortunately very uncommon; so far as we know, none of the text-books on surgery mention it.

This case seemed to be precisely like those of false anchylosis of the knee so often met with, and there was nothing in its appearance to lead one to anticipate or fear such a complication, and we question if it would ever be possible to distinguish beforehand cases like the above from the ordinary ones, which may be forcibly manipulated with impunity, so far as the vessels of the ham are concerned.

LETTER FROM VIENNA.

Messrs. Editors, — The week I passed in Vienna was mainly spent with my old teacher, Professor Arlt, whose clinique I daily attended. I was fortunate enough to arrive just before the commencement of the regular vacation, and found a large number of patients and students in attendance. My chief interest was in the cataract operations, which were all done by the method of Graefe. So numerous have been the opposing plans of extracting the lens advanced since the virtual abandonment of flap extraction, and more particularly since the death of Graefe, that it was most satisfactory to find the leading operator of Europe adhering to the same method we practice at the Boston Eye Infirmary, and for the superior advantages of which we have so long contended. Other operations, including that of Weber, have been given a fair trial here, and then relinquished, as offering certain disadvantages or furnishing less perfect results.

Arlt, claiming no modification of Graefe's method, insists nevertheless on the importance of performing the operation in a certain way. No atropine is used, either before or subsequently, unless complications arise. No anæsthetic is administered. An extremely narrow and slender knife is employed; the cut is by no means linear, but has an appreciable height; the puncture and counter-puncture are in the sclero-corneal region, and the apex of the cut approaches the edge of the cornea. When the corneal cut is completed the edge of the knife is not inclined forward, but carried on in the plane of the wound, and a long and ample conjunctival flap is slowly formed. On the formation of such a flap Arlt lays much stress, having, he says, seen infection communicated to the corneal wound from suppuration in a short and ragged conjunctival flap. I saw no bleeding into the anterior chamber in any of the cases operated on, so delicate was the knife employed and so perfect the coaptation of the edges

of the wound. The remaining steps of the operation are performed in the usual manner, special attention being given to a clean excision of the iris and to the prevention of any incarceration of iris-tissue in the corners of the wound. The iridectomy struck me as rather smaller than the one we usually make.

For two years past Arlt has met with a total loss of but 1.5 per cent. At the age of sixty-five he operates with the steadiness and dexterity that characterized him in my student days, sixteen years ago.

Under the title Concerning the Causes and Origin of Near-Sight, Arlt has just published a brochure of some eighty pages. His great experience and the interest so universally felt in this subject warrant me in giving a *résumé* of the conclusions at which he arrives, as nearly as possible in his own words.

According to him, then, the ordinary immediate cause of near-sight is the lengthening of the eyeball in the direction of its sagittal axis. Increased curvature of the cornea, as well as abnormal curvature, position, or density of the lens are of exceptional occurrence.

In connection with this departure of the eyeball from its normal shape, we find the sclera driven back and attenuated, especially about the posterior pole, the choroid and retina expanded, the vitreous increased in volume by means of serous exudation, rendered even somewhat fluid at its posterior portion, the longitudinal fibres of the ciliary muscle hypertrophied, and the circular but slightly developed, while the ciliary processes, the iris, and the lens occupy a deeper plane relatively to the basis of the cornea.

It has never yet been demonstrated that this increased length of the eye is congenital. The myopia of new-born children is due to the great curvature of the lens that then exists. The existence of the so-called *conus* in new-born children has no connection whatever with an increased length of the eyeball in the sagittal direction. Myopia may originate in childhood.

Thus myopia itself is never congenital, though a *disposition* to it may be. Nothing goes to show that there is an abnormal innate tendency in the eye to increase in length; indeed, the anatomical changes found in a myopic eye that has normal acuteness of vision go to controvert such a theory.

That myopia may be *acquired* by individuals who have no hereditary proclivities in this direction we have distinct evidence.

The principal among the disposing causes is a certain want of tone in and yielding disposition of the sclerotic coat.

Another factor may be found in the use of muscular power, partly as regards the accommodation, partly as regards the convergence of the visual axes.

The remote (that is, the predisposing or exciting) causes of acquired near-sight include everything that tends to cause the muscular power of the eye to be expended in one direction, be it excessive use on near objects, be it neglect of use on distant objects.

If hereditary or diseased tendency exist in a given case, the ordinary employment of the eyes will tend to further the giving way of the sclera. If
s are simply favorable (youth and normal development of the
pia can only ensue when the eyes are unduly tried and insuffi-
l.

The change in shape of the eye is brought about by a gradual pushing out of its posterior wall. Neither muscular action (on the part of the ciliary muscle or oblique muscles) brings this about, nor is it caused by forcible expansion of the scleral layers, or of the optic nerve sheath; it is due solely to the repeated temporary increase of pressure in the posterior segment of the eye.

This repeated temporary increase of pressure in the posterior portion of the eye is chiefly due to congestion of the uveal tract, and secondarily to exudation of serum in the posterior part of the vitreous.

The congestion is caused by the impeded flow of blood from the vasæ vorticosæ. It is hardly likely that the simple exercise of the accommodation brings this about, but it is almost indubitable that, when the convergence of the visual axes increases, the rectus externus and the obliquus inferior muscles severally exert a pressure on the venæ vorticosæ that impedes their circulation.

These are substantially the views Professor Arlt has just put forth. The pamphlet is illustrated by plates showing the different conformation of the ciliary muscle in the myopic, the emmetropic, and the hypermetropic eye.

With reference to the prophylactic measures to be adopted in the case of a student who exhibits acquired and increasing myopia, I was glad to find that Arlt advised entire disuse of the eyes on near objects for a lengthened period, a course of atropine treatment, and, if possible, a sea-voyage or a prolonged journey, during which the eyes should be exercised on distant objects.

HASKET DERBY.

VIENNA, *August*, 1876.

LETTER FROM STRASSBURG.

MESSRS. EDITORS, — In the summer of 1875 a certain Charles M. drank from a bottle which instead of his favorite beverage contained caustic potash. He discovered his mistake in time to avoid swallowing much of the fluid, only a small portion going into the œsophagus. He at once cleansed his mouth with cold water, and he says the resulting disturbance was not sufficient to warrant his consulting a physician. About two months later he began to experience some difficulty in swallowing; food would pass down into the œsophagus, but would stick there. This difficulty, however, was not constant, and not enough to cause him any apprehension. He took little notice of it until last spring, when he felt compelled to seek medical advice, and presented himself at the hospital at the clinic of Professor Lücke for treatment. The examination disclosed a stricture of the œsophagus which was seated low down, near the cardiac orifice of the stomach. The attempt was then made to dilate the stricture by means of catheters frequently passed. The patient soon learned to use the catheter himself, and did not make his appearance at the hospital again until the middle of July, when he came, saying that he was unable to pass the catheter himself, and had not been able to take any solid food for more than a week. An attempt was now made to pass the catheter, and the stricture was found permeable only for the smallest catheters, and these with the greatest difficulty. The œsophagus had undergone a sac-like dilatation just

above the point of stricture, which added to the difficulty of finding the orifice of the stricture. The patient could take nothing but liquid food. On the third day after his admission into the hospital the stricture became impermeable, and the patient was nourished by injections into the rectum. He now began to lose rapidly in flesh. The stricture was so low down that œsophagotomy was impracticable, and Professor Lücke advised the establishment of a gastric fistula as the only means of saving the life of the patient, for he was becoming very much emaciated. The consent of the patient could not be obtained to this operation until the ninth day after his admission, when he had become so weak that it was apparent to himself that there was no other alternative. The patient certainly was in a most unfavorable condition for such an operation, being in a state of great emaciation from so long a period of insufficient nutrition, having taken very little solid food during the week previous to his entering the hospital, and subsisting entirely upon liquid food for the following nine days, during six days of which time he was nourished entirely by injections into the rectum.

It would also require some time after the operation before food could be placed in the stomach, and during all that time the patient must subsist upon food injected into the rectum. In spite of his unfavorable condition Professor Lücke felt compelled to operate. The patient was placed under the influence of chloroform, but not to complete narcosis. The operation consisted in an external incision through the abdominal walls, extending from a little to the left of the median line along the lower border of the ribs of the left side fourteen centimetres — five and three fifths inches — in length. Through this opening the stomach was found and drawn up; an incision was made through its walls seven centimetres — two and four fifths inches — in length. The edges of the opening into the stomach were then united to those of the external incision through the abdomen by means of sutures, and that part of the abdominal incision which remained to either side of the portion already united to the stomach was also closed by means of sutures. The operation was performed according to Lister's method under carbolized spray, and the wound dressed with disinfected material. After the operation it was necessary to continue the injections per rectum, for although there was now an opening into the stomach, the latter must be kept quiet, that the wounds might unite, which would be impossible were food placed in the stomach and peristaltic action excited. A few hours after the operation a grave complication set in in the form of a severe diarrhœa; everything was ejected from the rectum, and in consequence of the entire deprivation of nourishment the case terminated fatally twenty-four hours from the time of the operation. There is at least a great probability that the operation would have proved successful if performed at the time when first advised, for then the patient was in a much better condition, and in the course of a week food might have been given through the stomach, if only in very small quantities, yet sufficient to sustain life. There are records of cases somewhat similar in which life was sustained for many years; in fact, there is a case reported, operated upon by a surgeon of some distinction upon the Continent, who made an incision into the large intestine, thinking it was the stomach, the mistake not being discovered until after

the wound had healed. The patient was fed through this fistula and life maintained for a number of months, the patient finally dying from some complication. The post-mortem examination revealed no peritonitis or other appreciable lesion, with the exception of the general pathological appearances characteristic of inanition.

Some time ago a child aged two years had symptoms of great dyspnœa. Upon questioning the mother it was found that on the previous day the child while at play suddenly gave an outcry, which was followed by a severe fit of coughing and threatened suffocation. The mother also stated that among other playthings the child had had beans, and the thought at once occurred to her that it had swallowed one of them. She seized the child and hurried with it to the nearest apothecary, who gave it an emetic, which seemed to relieve it for a short time, but soon after the child was seized with another fit of coughing and difficulty of breathing, during which attack and subsequent ones it is said to have been blue in the face, and a number of times the mother thought it had ceased breathing altogether. The child had several such paroxysms during the afternoon and following night, amounting to eight in all, and was brought into the clinic the next morning. While Professor Lücke was making the examination, the patient was seized with another paroxysm of coughing and gasping for breath, brought on by its crying upon being brought into the room. The attack was very protracted, and the little patient at last fell over upon the table in a state of complete asphyxia. The professor had entertained some doubt before as to the advisability of operative proceedings. From the frequency and severity of the paroxysms it was evident that the obstruction was deep-seated in the bronchus, and it was doubtful whether anything could be gained by an operation. Another unfavorable circumstance was the length of time which had elapsed since the swallowing of the bean, nearly twenty-four hours. It had worked its way into the left bronchus as far as the point of bifurcation, where it had lodged itself, and having swollen from the imbibition of fluids had become firmly wedged in its position. There was no respiratory sound to be heard over the left lung. The condition of the child as it lay upon the table allowed no time for doubt or reflection, as it was apparent that it would soon expire if left to itself. Professor Lücke at once cut through the trachea and passed a large rubber catheter through the opening into the bronchus. The catheter at once dilated the tube, and through its irritation caused the child to cough; the coughing expelled both catheter and bean. Respiration was resumed, and the child returned to consciousness. The opening in the trachea was then united by means of sutures. Some blood necessarily escaped into the bronchi, but this together with the mucus which had collected in the tubes was subsequently expelled by expectoration. A few hours after the operation the child appeared as well as ever. There was a slight emphysematous enlargement about the neck, which disappeared quickly upon the application of collodion. The after-treatment consisted in the exhibition of a mild expectorant for the relief of a slight bronchitis. The wound in the trachea united rapidly, and the patient was dismissed from the hospital four days after the operation. I saw the patient two weeks later, and found the wound healed completely and the child restored to perfect health. GEORGE A. BRUG, M. D.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING OCTOBER 7, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	450	22.05	29.35
Philadelphia	825,594	329	20.72	22.24
Brooklyn .	506,233			24.92
Chicago . .	420,000			19.75
Boston . .	352,758	141	20.78	26.20
Providence	101,500	40	20.49	19.02
Worcester .	51,087	9	9.16	20.91
Lowell . .	51,639	30	30.21	20 55
Cambridge	49,670	13	13.61	23.31
Fall River	50,372	17	17.55	23.99
Lawrence .	36,240	18	25.83	25.96
Lynn . .	33,548	18	27.89	19.23
Springfield	32,000	11	17.87	20.93
Salem . .	26,344	16	31.58	22.92

Normal Death-Rate, 17 per 1000.

APPOINTMENTS IN THE MEDICAL STAFF, M. V. M. — The following appointees, having successfully passed the Board of Medical Officers authorized by G. O. No. 24 A. G. O., current series, have been commissioned : —

Stephen W. Hayes, Surgeon (rank major) Third Battalion of Infantry, from September 23, 1876.

Wooster P. Giddings, Assistant Surgeon (rank first lieutenant) First Battalion of Light Artillery, from September 3, 1876.

Frederic H. Thompson to be Surgeon (rank major) Tenth Regiment of Infantry, M. V. M. from August 19, 1876. Before the reorganization of the militia Dr. Thompson was assistant surgeon of this regiment.

BOOKS AND PAMPHLETS RECEIVED. — Causes and Operative Treatment of Dupuytren's Finger Contraction. By Dr. Otto W. Madelung. Translated from the German. London: Trübner & Co.; New York: G. P. Putnam's Sons. 1876.

Salicylic Acid: The Experience of Maine Physicians in its Use. Reported by F. H. Gerrish, M. D. (Reprinted from the Transactions of the Maine Medical Association.)

Degeneration of the Placenta as a Cause of the Death of the Child. By Charles A. Leale, M. D. (Reprinted from the Transactions of the New York Academy of Medicine.) New York: D. Appleton & Co. 1876.

Blood-Letting in Puerperal Eclampsia. By Henry T. Campbell, M. D. (From the American Journal of Obstetrics.) New York: William Wood & Co. 1876.

A Practical Treatise on the Diseases, Injuries, and Malformations of the Urinary Bladder, the Prostate Gland, and the Urethra. By Samuel D. Gross, M. D. Third Edition, revised and edited by S. W. Gross, M. D. Philadelphia: Henry C. Lea. 1876. (For sale by A. Williams & Co.)

Chemistry, General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia. A Manual. By John Attfield, Ph. D. Seventh Edition. Philadelphia: Henry C. Lea. 1876. (For sale by A. Williams & Co.)

Ziemssen's Cyclopædia. Vol. VI. Diseases of the Circulatory System. New York: William Wood & Co. 1876. (Boston agents, H. D. Brown & Co., 67 Cornhill.)

Hygeia, a City of Health. An Address. By B. W. Richardson, M. D., F. R. S. London: Macmillan & Co. 1876. (From A. Williams & Co.)

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REMARKS ON THIRTY-TWO CASES OF PULMONARY GANGRENE.[1]

BY THOMAS W. HUNTINGTON, M. D.

THE cases which form the subject of this paper were compiled from the Massachusetts General Hospital records, and were all of their kind reported from 1857 to 1875 inclusive.

The principal motive prompting to this work was a desire to learn more accurately, if possible, what is the probable course and termination of the disease. There seems to be an impression very generally prevalent that the disease, once fairly established, is progressive in its tendency, and that the lung refuses to set up the line of demarkation so essential to repair and cure.

Niemeyer, in writing of this subject, states that recovery "is a very rare event indeed."

Hertz, in his treatise, published in Ziemssen's Encyclopædia, is rather more liberal, as he remarks, "The prognosis is not absolutely unfavorable, as was once supposed."

Considering the urgent and most distressing symptoms of pulmonary gangrene, unmistakable alike to patient and attendant, it is not wonderful that such an opinion arose, even if it can be shown to be quite erroneous. It is certainly true that but few and meagre collections of such cases have been made, from which alone an accurate judgment can be formed. My own impression, derived from the cases under consideration, is that a very large proportion of uncomplicated cases terminate favorably.

Before proceeding further it is proper to mention the two forms of the disease ordinarily described, and to indicate that which in this connection is more interesting. Diffuse gangrene, involving from the beginning an extended tract of lung tissue, is by far the rarer form, and from its nature runs an inevitably fatal course. Cases coming under this head must clearly be discriminated against in estimating the results in the more common and less serious circumscribed gangrene, wherein a limited portion or portions of tissue are implicated, admitting on theory at least the possibility of repair.

[1] Graduation Thesis at the Harvard Medical School, in June, 1876.

Another preliminary statement suggests itself regarding the records of the cases, many of which for various reasons are found to be defective in important details. Thus, in the records of the thirty-two cases the matter of *hereditary tendency* is entirely ignored in twenty-one. In five there was a history of phthisis, in one of pulmonary gangrene, and in five the "family history" was reported as good. With regard to *habits*, a very important item as bearing upon causation, there is no record whatever in twenty-six cases, while in six the free use of liquor is noted. Considering the class of patients which forms a large majority of the cases, it is safe to assume that intemperance formed an element in very many of them, so that any deductions from the above data would be quite valueless.

Sex. — Of the thirty-two patients twenty-four were males and eight females. It is an interesting fact that in the same number of cases collected by Lebert and mentioned by Hertz, twenty-two were males and ten females.

Age. — The youngest patient was ten years of age; disease complicated with phthisis and empyema; result fatal. The youngest patients without complication were two aged eighteen. Both were discharged "much relieved," and with a prospect of permanent recovery. The oldest was sixty-four, the disease following croupous pneumonia, diffuse; result fatal. The next oldest were two aged fifty. In one the gangrene was diffuse, following pneumonia; result fatal. The other was a well-marked case of circumscribed gangrene. Patient was discharged, well.

The following is a division of ages according to decades: —

Between	1 and 10 there was	1 case.
"	10 and 20 there were	3 cases.
"	20 and 30 there were	9 cases.
"	30 and 40 there were	12 cases.
"	40 and 50 there were	4 cases.
"	50 and 60 there were	2 cases.
"	60 and 70 there was	1 case.
	Total . .	32 cases.

Employment. — The twenty-four males were distributed among eight different callings. By far the greater number were inevitably subjected to extremes of temperature and to wet. Thus, twelve were common laborers, four were seamen, and the remaining eight were variously occupied. The eight females represented but three different callings: five were domestics, two were housewives, and one was a seamstress. In brief, twenty-one of the thirty-two cases can be said to have had exposure as an element in causation.

Duration. — No accurate statements can be made upon this topic, except in those cases which terminated favorably or fatally, while under observation, as there are no subsequent data concerning those discharged

during the progress of the disease. Of the eleven fatal cases, the longest was in progress ten months, the shortest one month; average duration, 3.3 months. Of the seven cases of recovery four had a duration of seven months, two of three months, and one of four months; average duration 5.3 months.

Causation. — Little remains to be said upon this topic further than the general statements made under "employment" and "habits." It is interesting, however, to note that of the eleven fatal cases, in seven the disease was preceded by croupous pneumonia, in one by cancer of œsophagus (gangrene caused by mechanical pressure), and in one by empyema and phthisis. In both the last cases death was due in large part to the original disease.

Results. — Seven cases were discharged well; six much relieved (these with proper care and favorable circumstances doubtless proceeded to ultimate recovery); three cases were temporarily relieved; five were not relieved, two of which were in the hospital but for a brief period, and were not treated; eleven cases terminated fatally. Several of the above statements will be subject to further comment under the following topic: —

COMPLICATIONS.

Cases with complication	10	
Cases without complication	22	
Phthisis as a complication occurred in		8
Empyema " " "		1
Cancer of œsophagus as a complication occurred in		1

In seven of the cases without complication gangrene followed pneumonia, and was diffuse. Termination fatal.

Leaving the latter out of the discussion, according to the original plan, the following statement can be made. Of the fifteen cases without complication five were well, six much relieved, one was relieved temporarily, three not relieved, none died. In other words, among the cases of *circumscribed gangrene* there were eleven favorable and four unfavorable terminations.

On the other hand, of the complicated cases four died, two were not relieved, two were temporarily relieved, and two were cured of gangrene. That is, two terminated favorably so far as the disease under consideration is concerned, and eight terminated unfavorably.

Summary of results and complications: —

CASES WITHOUT COMPLICATIONS.

Terminated favorably	73.3+ per cent.
Terminated unfavorably	26.6+ per cent.

CASES WITH COMPLICATIONS.

Terminated favorably	20 per cent.
Terminated unfavorably	80 per cent.

Below is appended an account of two cases of gangrene exemplifying numerous particulars which it has not been convenient to collect for general discussion.

Thomas McG., aged thirty-seven, was born in Ireland and lived in Boston. Employed as a cook. Entered hospital July 16, 1864. Case was reported as follows: two months ago he caught cold without known exposure, and began to cough. Cough soon became very severe, with profuse expectoration. Seven weeks ago he felt a sharp, darting pain under the right breast, which has been persistent. During the past month has had one severe and two slight hæmoptyses. Is much emaciated. Appetite poor. Countenance distressed. Skin pale. Has had dyspnœa on slight exertion, and quite profuse diarrhœa for several days.

Expectoration consists of about three ounces of dark, muco-purulent matter, with a little blood. Odor gangrenous, with perceptible odor of wet mortar.

Physical Examination. — Dullness below right clavicle. Respiration harsh and jerking in right upper front, with occasional sonorous râles.

From this time on there was constant increase of the urgency of all the symptoms. Cough more frequent and harassing. Expectoration more profuse and fœtid, with exhausting diarrhœa, and finally great prostration.

August 14th. Nearly one month after entrance the following record was made: Dullness over entire front and back of chest. In right upper front abundant crepitation, with occasional bronchial respiration, and same signs in right back.

Patient continued to sink, and died September 27th.

There is no record of a chill at any time after entrance, and no thermometric observations were made.

Autopsy. — The right lung exhibited a large amount of tubercular deposit, especially in upper half of right lobe, where were numerous cavities, small and circumscribed. In the upper part of right lower lobe was a small cavity, which may have been gangrenous, but this was not determined accurately. The left lung was free from tubercle. Very near the base was a cavity the size of an ordinary peach, which was undoubtedly gangrenous, emitting an exceedingly fœtid odor, and lined with soft shreds of dead lung tissue.

From the above it is apparent that many of the principal features of the case were consequent upon the presence of tubercular disease, and that the termination was dependent no less upon this than upon the gangrenous process, which was clearly a minor element in the case.

The second case at the outset presented features not less alarming in character than the first, but its more fortunate termination lends to it a livelier interest.

Edward C. was born in Ireland and lives in Boston. Employed as a longshoreman. Entered hospital October 27, 1875. For several years has used a large amount of liquor, and has led an irregular life.

Has been much exposed to wet and cold, often working all night in the rain. At the same time he took but little and insufficient food, depending mainly upon alcoholic stimulus for support.

Had had occasional cough for two or three years, with slight expectoration, which attracted little attention. For three months previous to entrance had pain in right lower chest, increasing in severity. Cough also became more frequent and harassing. Sputa at first consisted of aerated mucus, changing to dark yellow or gray, and were very abundant. About a month ago sputa began to omit an offensive odor (described as rotten), often causing nausea and vomiting, occasionally tinged with blood. Has lost weight and strength very rapidly.

October 27th. *Present Condition.* — Weight one hundred and fourteen pounds, normal weight being one hundred and fifty pounds. Face flushed, countenance haggard, with an expression of anxiety. Skin hot. Great dyspnœa on slight exertion. Cough very urgent, causing sharp pain in right side. Expectoration thick and opaque, often to the amount of a pint and a half in twenty-four hours. Color almost black, with here and there streaks of blood. Taste described as hot and salty. Odor of sputa and breath was extremely offensive and penetrating, so that patient was at once transferred to an isolating ward. Bowels irregular, with occasional diarrhœa. Appetite very poor. Sleep disturbed. Pulse 120, very feeble. Temperature 102.5°. The general condition of the patient was that of prostration amounting almost to collapse.

Physical Examination. — Condition of patient was such as to admit of no thorough examination until a week after entrance, when there was found "crackling" in right supra-spinous fossa, and amphoric respiration over right upper back. Four days later the record was as follows: Flatness in right supra-spinous fossa; dullness, subcrepitant and sonorous râles, and metallic respiration over right front. Respiration amphoric over upper right back. No abnormal signs over lower backs.

For two weeks patient continued about as on entrance. Temperature ranged from 100° to 104°. Frequent slight hæmoptyses. Twelve days after entrance had a severe chill in morning, lasting nearly an hour. This was followed for several days with occasional intervals of chilliness and subsequent rise of temperature.

One month after entrance, reported generally better; cough and expectoration less, but had a severe chill in the evening. The old symptoms returned, and two days later the patient raised four or five ounces of blood and gangrenous *débris*. At the same time he had profuse diarrhœa, persisting for several days. This was apparently attended with relief, as the amount of sputa and the fœtor gradually diminished.

Two months after entrance physical examination showed marked improvement in the condition of right lung. There was, however, flatness in right supra-spinous fossa, with blowing inspiration and expira-

tion. There was no râle, but an occasional gurgle was heard. Good resonance over right upper front.

From this time on there was a gradual but uninterrupted improvement. Sputa became less profuse, lighter colored, without blood, and without odor, and finally disappeared entirely. Signs in chest slowly cleared up, latterly being confined to a small area over centre of right scapula, and before his discharge could not be detected at all. Cough disappeared with the physical signs. Diarrhœa persisted quite late in the history of the case, recurring frequently, but was usually attended with relief rather than distress, and was only checked as it became exhaustive.

Patient remained in the hospital four months, being discharged February 29th. During the latter part of this time he gained flesh and strength very rapidly. His weight at the time of discharge was one hundred and sixty-four pounds, showing a net gain of fifty pounds. As he left the hospital his appearance was that of a robust and healthy man.

Treatment. — No regular line of medication was adopted as bearing directly upon the pulmonary lesion. Symptoms as they arose were alleviated as far as possible by the proper remedies. It is worth while, however, to mention the use of carbolic acid internally as a disinfectant. One minim was exhibited every three hours in a proper menstruum, with very apparent diminution of the gangrenous odor of exhalations, and with proportionate relief to both the patient and the attendants. In this connection too great importance cannot be attached to the nutrition and hygienic surroundings of the patient. Thorough rest, an abundant supply of warm, pure air and good food, and long-continued, never-tiring care and nursing are elements in treatment without which the chances of recovery diminish materially or disappear altogether.

IDIOPATHIC GLOSSITIS.[1]

BY E. H. BRADFORD, M. D.

A YOUNG man aged twenty, of an average healthy appearance, presented himself for treatment, complaining of a swelling of the tongue. The night before, his tongue began suddenly to enlarge without any known cause. There had been no injury to the tongue, and the patient had been taking no medicine. Two leeches were applied to the tongue on the advice of an apothecary, and ice was used.

On examination the tongue was seen to be swollen to more than double its normal thickness on the right of the median line; the swelling was greatest about two inches from the tip. Some swelling was to be seen also on the left side, and the edges seemed thicker than usual.

[1] The accompanying case may serve as a companion to the one published in a late number of the JOURNAL (September 7, 1876).

The surface of the tongue was normal, with the exception of a few excoriations caused apparently by the friction of the teeth. The gums were healthy and nothing unusual was to be seen on the fauces or pharynx. The mucous membrane beneath the tongue, covering the upper surface of the sub-lingual gland, appeared slightly swelled. There was no enlargement of the glands of the neck. Speech was not interfered with, and there was no pain or tenderness. The tumor, however, was quite hard and felt like a circumscribed lump when taken between the thumb and forefinger.

The patient said that a year before his tongue became suddenly large in a similar way, the swelling commencing at night and increasing so that he could breathe only through his nostrils and feared he would be suffocated. On medical advice leeches were applied to the tongue and ice was used afterwards, and in a week or ten days the tongue assumed its normal size. The physician in charge, he claims, attributed the tumor to smoking.

The second attack passed off without any great trouble. The swelling diminished the next day under no treatment except ice, and a week later it had entirely disappeared.

On cross-questioning it was learned that the patient had had a chancroid a few years previous, but no specific symptoms could be ascertained.

Beside the authors quoted by Dr. Wingate in connection with his case, a few others mention idiopathic glossitis. In Holmes's System of Surgery (article Acute Glossitis), Mr. S. Cooper is quoted as mentioning that the disease may occur spontaneously and without any apparent cause. Mr. Holmes Coote cites four cases, happening in his practice, of sudden spontaneous enlargement of the tongue, all recovering perfectly in a week.

Mr. W. Fairlie Clark (Diseases of Tongue, page 104) says, "It is not uncommon to meet with a circumscribed induration in the substance of the tongue. The patient without having experienced any previous uneasiness becomes aware of a lump in the substance of his tongue."

Nine cases of severe idiopathic glossitis are quoted, incisions being made in almost all. Death occurred in one case.[1]

A case is quoted from the Dublin Hospital Reports, iv. 43, showing that the disease may affect one side of the tongue, the other being only slightly or not at all enlarged.

[1] Lancet, 1828, page 16.

RECENT PROGRESS IN PATHOLOGY AND PATHOLOGICAL ANATOMY.[1]

BY R. H. FITZ, M. D.

PATHOLOGICAL ANATOMY.

Infective Osteomyelitis and Periostitis. — Lücke has applied the term primary infective osteomyelitis and periostitis to an affection of the bones which Chassaignac first separated from other diseases of the bones, and to which he and later writers, French and German in particular, have applied various names. The diversity of these, their relation now to the local anatomical changes and again to the clinical features of the affection, but none calling attention to the essential peculiarity of the process, render excusable, even desirable, the application of a term which shall indicate more exactly the nature of the disease. Nearly all the authors agree upon the malignant course of this inflammation, the symptomatic resemblance of its clinical course at times to a severe typhoid fever, again to a pyæmia or an articular rheumatism, and its frequent fatal issue or termination with a separation of the epiphyses.

From the apparent primary local origin of the process and the not uncommon secondary changes in remote organs, from its clinical and anatomical resemblance to a pyæmia, the infective nature becomes evident; one where the source of the infection must be looked for in the bone-marrow or periosteum, not from a mucous membrane or a wounded surface. In two of Lücke's cases the presence of micrococci has also been ascertained, both in the primary and secondary alterations.

Eberth[2] presents additional evidence in favor of the infective nature of this disease. The patient, while feeling well, was suddenly seized with a chill, followed by prostration, pains in the left leg and elsewhere in the body where touched. Five days after the beginning of the sickness the patient was received into the hospital, his condition then rendering a positive diagnosis impossible, though it was thought probable that the case was one of septicæmia with pulmonary infarction. Death occurred on the same day. At the autopsy collections of pus were found beneath and about the periosteum of the left femur, phlebitis of a periosteal vein, purulent periostitis and synovitis of some of the bones of the foot, abscesses in the walls of the heart with pericarditis, and beginning abscesses in the lungs with pleurisy. But few apparent micrococci were seen in the blood, while collections of them were found within and in the vicinity of the cardiac and pulmonary abscesses. Emboli of fat drops were likewise found in the pulmonary vessels.

[1] Concluded from page 467.

[2] Virchow's Archiv, 1875, lxv. 341.

The frequent occurrence of fat and micrococci in the same vessel suggested a common source of these emboli, which was thought to be the periosteal abscess on the femur. With regard to the origin of the process Eberth agrees with Lücke in considering that local disturbances of circulation result from an injury and a chilling, and that injurious substances which have entered the blood (in this instance the micrococci) become stagnant and develop, and thence the secondary depositions.[1]

A second case is reported, where no micrococci were found, but where the clinical course was so similar that it too was regarded as a case of infective periostitis.

A third case is published by Friedmann[2] where the patient, a boy previously healthy, fell some weeks before his illness and is said to have complained of pain in his leg; he was able to go to school in the mean time without manifesting any evidence of disease.

A sudden pain then appeared in his left knee, which obliged him to go to bed, where he was seen two days later by a physician, who regarded the case as one of beginning coxitis. Six days later a continuous high fever began without any premonitory chill, and the disease pursued a typhoidal course, with inflammation of the parotids but without enlargement of the spleen or symptoms of intestinal disturbance. On the tenth day of the disease a slight œdematous swelling was evident in the upper third of the thigh and at the knees, with indistinct fluctuation and circumscribed redness over the right patella. Three days later a series of small subcutaneous abscesses were evident beneath the skin of the abdomen, and the child then died.

Almost the entire marrow in the left femur was in a state of suppurative inflammation; there was a commencing separation of the epiphyses and periosteal abscesses, with pus in the knee and hip joints. Ichorous pleurisy and pericarditis were likewise present, engorgement and yellow hepatization of the lungs, but neither abscesses nor fat embolism in them. Neither in the marrow nor in the sub-periosteal abscesses could anything be found resembling bacteria. The resemblance of this case to one of malignant acute rheumatism was very strong, but to be distinguished by the pain from pressure upon the shaft of the femur, showing a local process there early in the disease, before the evidence of any affection elsewhere, and finally by the small number of joints affected and by the youth of the patient.

Senator[3] adds a fourth case, admitted to the hospital as suffering

[1] The experiments of Weissgerber and Perls (Archiv für experimentelle Pathologie und Pharmakologie, 1876, vi. 139) are interesting in this connection. Small particles of aniline blue and bacteria were injected into the blood of animals before and after the circulation through the renal vein was obstructed. It was not found that any greater accumulation took place in the kidney operated upon than in the other.

[2] Berliner klinische Wochenschrift, 1876, vi. 73.

[3] Berliner klinische Wochenschrift, 1876, vii. 89.

from typhoid fever, the patient, a girl of fifteen, remaining under his charge there till her death, fifteen days later. The diagnosis of typhoid fever made at the outset was adhered to throughout, the symptoms being high fever, mental disturbance, enlarged spleen, diarrhœa, gurgling, bronchial catarrh, and bed-sore. There was no distinct roseola. She complained of pain in the right foot, where there was a slight swelling, but it was thought probable that she had injured herself during her delirium. Pericarditis and pleurisy were found at the autopsy, also embolic nodules in the lungs and kidneys, pneumonia, an enlarged spleen, but no enlargement of Peyer's patches or of the mesenteric glands. There was a sub-periosteal abscess at the lower end of the tibia and a loosening of the epiphysis. The marrow throughout the lower portion of the tibia was infiltrated with pus. The pus contained numerous fat drops, but neither micrococci nor bacteria.

Attention is called to the necessity of bearing in mind the local disturbances at the outset of the disease preceding the typhoidal symptoms, their cause and development. A full history of the case, which should include the relation of the general to the local symptoms, particularly as to sequence, would do much towards preventing a mistake in diagnosis, especially a confounding this disease with typhoid fever. At the same time additional care is necessary from the fact that the osteomyelitis may be secondary in typhoid fever, just as the typhoidal symptoms are secondary in infective osteomyelitis.

Organization of the Red Thrombus. — Baumgarten[1] has studied the changes taking place in a vessel, artery or vein, after a double ligature has been placed about it. A cellular new-formation first develops from the intima of the ligated portion as well as immediately above and below the ligatures. That this process might take place it is unnecessary that a blood clot should be present, and the blood within the portion of the vessel separated from the circulation may even remain fluid for a fortnight. The folds of the inner elastic layer become filled with large and small nuclei lying beneath the elevated unbroken endothelium. As these cells increase in number a concentric diminution in the volume of the vessel takes place, those lying nearest the canal becoming of an elongated spindle shape, forming concentric layers resembling a newly formed muscular coat, yet giving no reaction with picric acid. The cells lying more externally are stellate, and form a loose, irregular net-work. As this growth increases, the thrombus diminishes without any evidence of cell proliferation within it, nor is there any evidence of the new formation of blood-vessels in this tissue. In those parts where the middle and inner coats are ruptured by the ligatures, a vascular granulation tissue becomes developed from the pre-existing elements of the external coat and extends towards the thrombus,

[1] Centralblatt für die medicinischen Wissenschaften, 1876, xxxiv. 593.

which yields as before. The vessels of this granulation tissue often become continuous with those of the surrounding connective tissue. Eventually lateral branches arise which penetrate the middle coat and anastomose with the vessels near it.

The vessel thus becomes completely filled, and the origin of the vascular tissue could be demonstrated on longitudinal sections also. The writer believes that the lateral growth arises from the endothelium of the inner coat, because no other cells exist there which can serve as a matrix, provided the migratory cells are excluded. No progressive changes were observed in the white corpuscles of the thrombus, nor was any evidence found of their perforating the endothelium and becoming multiplied beneath it. The first products of the new-formation were endothelial in character, and from them to the large spindle cells were numerous transitional forms. Further, by irritation of the endothelial layer a growth was produced within forty-eight hours, occupying its place and presenting every external evidence of cubic endothelium. The possibility of a progressive change in this layer is thus evident. The frequent occurrence of multi-nucleated endothelial forms of cells offers an additional ground in favor of the view asserted. The writer concludes that the so-called organization of the red thrombus is the result of two independent processes: a growth of the endothelium of the vessel, and tissue growth from without entering at the part where the ligatures are applied. In the latter almost solely the new formation of vessels takes place. The presence of a blood clot is unnecessary, for the process described may occur in its absence.

Riedel [1] also asserts from numerous experiments that the obliteration of the artery after ligature is due to a proliferation of the endothelium. At the same time, according to his observations, there generally occurs a new formation of connective tissue outside the elastic membrane, which perforates the latter in spots and becomes united with the tissue proceeding from the endothelium. Thus a sort of cavernous tissue arises which has an independent vascular system towards the media, and eventually becomes converted into a cicatricial tissue.

When a double ligature has been applied, the presence of blood is unnecessary for this process to take place. When a single ligature is applied, the obliteration of the vessel seems to take place in the same way, though the growth of the endothelium is masked, perhaps impeded, by the fibrine present.

Lumbrici discharged from the Umbilicus. — Berner [2] records the escape of four living round-worms from an abscess developed without special symptoms in the umbilicus of a child four years of age. The

[1] Deutsche Zeitschrift für Chirurgie, vi. 459; Centralblatt für die medicinischen Wissenschaften, 1876, xxxvi. 653.

[2] Bayerisches Intelligenz-Blatt, 1876, xxiii.; Centralblatt für die medicinischen Wissenschaften, 1876, xxxvi. 655.

opening closed after a few days. It was supposed that the omphalo-enteric duct was still patent, and that a diverticulum was present at its entrance into the intestine. The worms, having entered the latter, had made their way through the remains of the vitelline duct to the navel.

Gall-Stones in the Urinary Bladder. — The presence of several calculi in the urinary bladder of a female was ascertained by Güterbock,[1] and their removal effected by lithotripsy. The chemical examination of these by Schultzen and Liebreich showed them to be composed mainly of cholesterine and biliary coloring matters with a crust of uric acid. There were three ways only by which such a calculus could have made its appearance there. It must have been introduced from without, have been formed in the urinary passages, or, having been formed in the gall bladder, been transported thence into the urinary bladder, directly or indirectly, through pathological processes. The first method was eliminated by the size of the calculus, which was that of a walnut. The doubtful occurrence of cholesterine in the urine, or its occurrence under conditions (pregnancy and pyelitis) which were not present in this case, eliminates the second method. With regard to the third possibility the examination of the patient gave no light. Hitherto only two cases of gall-stones in the urinary bladder have been recorded, in only one of which was the manner of entrance made clear by the autopsy. A cord was there found connecting the gall bladder with the urinary bladder, the lower portion formed from the urachus, the upper from the gall bladder.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

MAY 27, 1876. *Ovariotomy; Recovery.* — DR. D. W. CHEEVER reported a third successful case of ovariotomy and showed the specimen. The patient was a very large, strong woman, fifty years old. The pelvis was large, and she had borne two children. The tumor was of fifteen years' duration. The patient first came under Dr. Cheever's observation in May, 1875, when she was much oppressed by the size of the tumor, which interfered greatly with the respiration and digestion. She was tapped in July, 1875, and a large quantity of fluid was withdrawn. After the tapping there was considerable shrinking of the cyst, which was thought to be a single sac, with the pedicle in the left groin. The patient recuperated well, and traveled in the summer, but began to be inconvenienced again in the autumn. In the spring, as the cyst had refilled and the patient was in very good condition and of moderate size, an operation was advised and was performed on March 26, 1876.

The tumor was not very large, and consisted of a single cyst, which contained eighteen or twenty pints of fluid. There were no adhesions. The opening into the peritoneal cavity was large enough to admit the hand only,

[1] Virchow's Archiv, 1876, lxvi. 273.

and was open but ten or twelve minutes. The pedicle was short, so the clamp was applied across the base of the sac, and the surface rubbed with the tincture of the perchloride of iron, the wound brought together, and the abdomen wrapped in cotton batting. No antiseptics were used. There was little shock; the pulse never rose to 100, nor the temperature higher than 101°. There was no vomiting, but some colic. The bowels moved about the fifteenth day, and the clamp remained until the twentieth day. The water was drawn as often as necessary. The part of the sac which was left behind at first secreted the original fluid, which in forty-eight hours became pus. The wound cicatrized slowly, but at the time of the report was nearly well.

Dr. Cheever thought that the previous tapping gave the patient a better chance, and that the method of applying the clamp was superior to that of applying ligatures and dropping them back. He mentioned a previous case in which a ligature had remained eleven months, and then had come away by the rectum.

Dr. Cheever stated that he had opened the abdomen, for the removal of abdominal tumors, twelve times; in two cases at the City Hospital, in 1865 and 1866, for ovarian tumors, with fatal result; since January, 1873, in private practice, in ten cases; five of which were simple ovarian cysts, with three recoveries. Of the other five cases, one was complicated with pelvic abscess; one with ruptured and collapsed cysts, with ascites; and three were not ovarian; one each of cancer, of fibro-cyst of uterus, and of sarcoma. The last recovered.

Dr. Chadwick remarked that most of the cysts reported as occurring in this vicinity were single, whereas in Europe multiple cysts were more frequently seen.

Lister's Gauze Dressing. — Dr. Bradford showed a specimen, and said Lister's antiseptic gauze dressing, from a description, would appear to be quite a complicated matter, but it does not seem so when seen applied. The gauze is furnished among the other hospital supplies, and is used very much as an ordinary cloth compress would be. The spray is an inconvenience, but, according to the Edinburgh surgeons, a necessary one, if it is admitted that the access of air to a wound is or may be injurious. Mr. Lister's results have been quite generally made known in the journals, but one fact is usually overlooked by critics, namely, that the most remarkable success is not in amputations, excision of tumors, etc., but in the treatment of psoas and lumbar abscesses, and in affections of the joints; these are incised without hesitation by the surgeons of Mr. Lister's school, with no injurious results. Though the antiseptic gauze is now used with success in most of the medical centres in Europe, it has not been thoroughly tried in this country, owing probably to a belief that it is quite a complicated matter. It is, however, much less so than is ordinarily thought. The gauze can be made by any apothecary or imported at a moderate expense. The only difficulty about the spray is that it requires one additional assistant, which is no greater objection than could be urged against the use of ether.

Dr. J. B. Ayer and Dr. Chadwick said that they were much impressed in Edinburgh by the good results of the antiseptic dressing. Dr. Chadwick

mentioned the favorable report by Mr. Callender of cases which were treated without the antiseptic dressing, suggesting the idea that the good results of Mr. Lister might be due to the great care taken as well as to the carbolic acid.

Strabismus. — Dr. B. Joy Jeffries remarked on the operation for squint that section of the recti tendons is done to relieve a deformity, or to restore binocular vision. This latter cannot be done unless the oblique muscles act normally, to retain the parallelism of the meridians. The necessity of this and the action of the obliqui were explained by diagrams and a model. Illustrations were also shown of the position and inclinations of the double images in all the forms of ocular paralysis. The vast majority of the cases of convergent squint, which we have mostly to deal with, is dependent on hypermetropia, caused by the eyeball being congenitally too short in its antero-posterior diameter. The effect of this was explained on the blackboard, namely, the call for a greater change in the crystalline lens in accommodation, and hence greater and unnatural action of the ciliary muscle. The forced association of the muscular action of accommodation, and the internal recti in convergence, was dwelt on at length, and how this led directly to convergent squint as the patient's readiest relief from the annoying double images, and hence imperfect vision was explained. The necessity for glasses in the hypermetropic person, and their relief of the fatigue of the eye from over-exertion of the ciliary muscles, were insisted on and made evident, as also the equal necessity of properly-adjusted glasses after squint operation in over-sighted persons.

Next the call for accurate binocular vision was pointed out, and the necessity for the two eyes being enabled by the operation to focus on corresponding portions of the retinæ images of as near as possible equal size. It was explained that as soon as alternate squint in the child became changed to a fixed squint in either eye, the visual power in this then disused eye would at once commence to deteriorate and go steadily on through life, till use of it was practically lost. Hence the constant reminder from the ophthalmic surgeon of the necessity of operating on squinting eyes, as by the restoration of binocular vision alone can vision be retained or regained. How vision is lost in a non-used eye is difficult to explain, as the retina will retain its full power of receiving and transmitting perceptions many years, behind an opaque crystalline lens.

That squint is not a monocular trouble was long ago proved by its cure when only the non-squinting eye was operated on. The natural necessity, therefore, of an operation being divided between the two eyes, and the better resultant effect, was explained on the blackboard. The advantages the internal recti muscles thereby gained in their joint action was particularly dwelt upon and made evident. Here the great difficulties of the ophthalmic surgeon begin. He can cure the squint readily and at once, but the child, years after, returns to him an adult with a worse deformity, namely, divergent squint, not so easily relieved by the operation for bringing forward the insertion of the tendon. Therefore, in spite of the request of the family physician, or of the patient's parents or guardians, we must, coarsely only, correct the hypermetropic squint in the child, and subsequently relieve it entirely by a second, or, if necessary, by a third operation, requiring meantime the use of proper correcting glasses.

The dynamics of the ocular muscles have grown to be almost a special study within the specialty, and a thorough practical knowledge of these is requisite to enable the surgeon to operate intelligently as well as skillfully.

Dr. D. Hunt said that Dr. Jeffries's remarks left nothing to be said, as far as the popular exposition of the subject of squint is concerned, but that the diagrams reminded him of an historical and a physiological point of some interest. First, as to the lower diagram, copied from Reute; he found an idea of a like diagram in the Anatomy of Eustachius (1716). It was this diagram, in which six muscles were described, that directed Dr. Hunt's attention to an error made by H. Schrön, of Jena, in Band xx., Abtheilung 1, of Graefe's Archives. Speaking of the operation for squint before Dieffenbach, Dr. Schrön says of Taylor, the famous quack oculist of the previous century, "He ascribed six muscles to the eye, while generally it was held with Galen, from investigations made on the eyes of oxen, that there were seven. In the works of Willis, edited by Blasius in 1682, is found a correct description of the muscles of the eye; also in Cowper's Anatomy, published in 1694. Taylor was born in 1708; thus a correct description had been published twenty-six years before he saw the light; besides these authors, Eustachius, Albini, Morgagni, surely representative authors, all give six muscles as the proper number. Still further proof is afforded by the fact that Zinn (1755), in his Descriptio Oculi Humani, does not refer to Taylor in speaking of the muscles of the eye, but mentions him in connection with the nerves. From all this it is concluded that Taylor on this point, as in regard to most others, dealt more in pilfered facts than in the results of independent research. Second, the upper diagram recalls the interesting points, lately made by Professor Merkel, of Rostock, in the *Graefe-Saemisch Handbuch der Augenheilkunde*, as to the check ligaments of the eyeball, regarded as a joint; we know the check arrangements of different joints besides those furnished by their structure. Professor Merkel sees in the bands of connective tissue that extend from the muscles to the walls of the orbit such an arrangement for the eye; all the recti muscles have such bands, but, of the oblique muscles, only the superior is supplied with them; however, there are two sets, one before and one after the muscle passes through the pulley. By experiment it is demonstrated that the set of bands passing from the muscle behind the pulley serves as the check to the force exerted by the superior oblique, while those bands anterior to the pulley serve as checks to the action of the inferior oblique.

In answer to Dr. H. P. Bowditch, Dr. Jeffries said that we could learn to disassociate, to a certain extent, accommodation and convergence, and in that way only could a hypermetropic person see objects at a distance.

Dr. Aaron Young read a paper on the use of oxygen gas in health and disease, which was supplementary to papers written by him in 1863 and 1875, in which he claimed to have made the discovery that oxygen was an antidote to chloroform asphyxia. Dr. Young discussed at length the value of oxygen in promoting the absorption and assimilation of fat, concluding that its action is upon inorganic material only, not upon the organized tissues of the body; that it is a vitalizing agent, in no way causing destructive combustion. Several cases of catarrh, capillary venous congestion, etc., were reported,

in which the tonic effect of inhalations of pure oxygen was beneficial. The gas was administered to the amount of four gallons at a sitting, repeated at intervals of a few days.

Dr. J. B. Ayer showed the aspirator of Coutereau, a modification of Dieulafoy's instrument. The capacity was an ounce and a half. Dr. Ayer had removed seven and a half pints of fluid from a chest with this instrument, and considered the slow withdrawal advantageous.

"OPIUM ANTIDOTES" EXPOSED.

In the month of August last, Dr. George F. French, of Portland, Maine, was applied to by an opium-eater who asked his advice about a preparation advertised as a sure cure for the opium habit. Naturally being suspicious of such an article, he sent to the manufacturer, Mrs. J. A. Drollinger, of La Porte, Indiana, for a sample bottle. This was furnished, but, as we understand, the proprietress declined to give any information as to its composition, saying, however, that it "is harmless when taken as directed," and "does not contain opium in any form." Failing to be satisfied with this assertion, the doctor applied such chemical tests as he conveniently could and got the reactions of morphia. But to make assurance doubly sure, and to supplement and confirm the chemical test by a physiological one, he secretly administered a small dose of the "antidote" to a person who had a peculiar idiosyncrasy with reference to opium. The speedy result was, as had been anticipated, a manifestation of the symptoms which in this individual had always followed the exhibition of opium, namely, suffusion of the eyes, loss of voice, pain in the head, and insomnia. Dr. French then reported these facts to the Cumberland County Medical Society, which, at his suggestion, at once appointed a committee to further investigate the matter, and voted to bear the expense of whatever analyses might be necessary.

At the regular meeting of the society in September the committee presented the following

REPORT.

The committee to whom was assigned the duty of investigating the so-called "opium antidote" prepared by Mrs. J. A. Drollinger, of La Porte, Indiana, beg leave to report that a sample bottle of the article, which was obtained directly from the manufacturer, was sent to Dr. Edward R. Squibb, of Brooklyn, N. Y., for quantitative analysis. His onerous engagements rendered it impossible for him to conduct the investigation in person, but he sent the specimen to Messrs. Walz and Stillwell, chemists, New York, a firm which he thoroughly confides in and indorses. So deeply interested did he become in the project that he insisted upon bearing the expense of the analysis, in spite of the committee's expressed unwillingness to have him assume such a tax.

Walz and Stillwell report that "this sample is glycerine colored with aniline red, and containing in solution crystallized sulphate of morphia 1.383 per cent. by weight" — about seven grains to the ounce.

While this investigation was progressing, the committee found another alleged "opium antidote," prepared by "Dr. S. B. Collins, the Great Narcologist of the Age," likewise of La Porte, Indiana. A specimen of this was submitted to Dr. Henry Carmichael, Professor of Chemistry in Bowdoin College and Assayer of the State of Maine, who arrived at the following conclusions: —

"(1.) The opium antidote contains morphine.

"(2.) The morphine is combined with sulphuric acid.

"(3.) The sulphate of morphine amounts to 3.2 per cent., or fourteen grains to the ounce."

Dr. Walz says that he made an analysis of Collins's "antidote" in 1871, and found that it contained morphia, though he did not ascertain the quantity.

In conclusion, your committee respectfully suggest that the society take some action which will result in the wide dissemination of the information which has been acquired concerning these dangerous preparations.

FREDERICK HENRY GERRISH,
GEORGE F. FRENCH,
THOMAS A. FOSTER,
} *Committee.*

The society instructed the committee to present their report to some prominent medical journal and, if it seemed to them advisable, to give the public warning of the danger to which it is exposed through the newspapers of the State. A vote of thanks was passed to Dr. Squibb for his generous assistance.

The importance of this exposure is too obvious to require any extensive comment on our part. Physicians now have something better than general reasons to offer their patients when warning them to shun such nostrums. The profession will not be insensible to the valuable service which the Cumberland County Medical Society has rendered it and the community, and it is to be hoped that other similar bodies will be encouraged to display equal enterprise and spirit. There is a great opportunity for our brethren in the region of La Porte to distinguish themselves as guardians of the health of the people, and we trust that they will not be slow to follow up the track so well opened by their fellows in Maine.

INTRODUCTORY ADDRESSES.

THE custom of delivering addresses at the opening of the medical term is, we think, falling into disrepute. Harvard abandoned the practice in 1871, when the new system was adopted, and this year two of the London hospitals, we believe, have done the same. We are inclined to think the change a wise one. Almost everything that can be said has been said, and little but repetition remains. To present platitudes effectively requires, if not a great, at all events a rare order of mind, and the time is going by when platitudes undisguised will pass muster. It is true that great professional questions are not scarce, but an introductory lecture is not for their discussion. What the student needs is advice; and this is best given by each professor, for his own branch, in the most matter-of-fact manner, without the aid of the flowers of rhetoric. The best plea for these lectures is their effect in exciting enthu-

siasm, and this is well argued by Mr. Allchin in his address at Westminster Hospital. "Frankly, I consider," says he, "that good does come from this custom; and though I dare not hope that my words this evening will justify this opinion, I can say that I have distinctly felt the influence for good of such addresses, not only in my first years as a student, but also more recently when I listened to the masterly oration delivered three years ago by Mr. Brudenell Carter, at St. George's Hospital. I am not one of those who would altogether deny in one's daily work the influence of what may be called enthusiasm, and there are few methods of so deeply stirring men's minds as spoken words. It is all very well to say that one can read an address in far less time than one can listen to it; but, apart from the possibility of the address not being read at all, it cannot be doubted but that it appeals to the brain in a far more forcible way when it comes from the author's lips, however feebly he may express his sentiments, and this in no way being affected by the intrinsic merit of the composition. I can trace in myself, and I firmly believe it to have been the case in others, the influence of the first words that I heard in a medical school, words that not infrequently urged me on to work, and encouraged me to fresh efforts, when I felt as all who work do feel, seldom or often, that the work before them is beyond their powers. And it is exactly at the outset of the student's career that such silent help is needed. Later, when he comes to see the exact position that his science takes in the wide field of knowledge, and that he as a doctor takes among his fellows, his enthusiasm has been chilled and snubbed down; happy he if it be not altogether extinguished. In the case of the boy, for little more is he very often, brought fresh from school, face to face with the many branches of study that constitute his first year's course, he is apt after a few weeks to look upon attaining a knowledge of them as almost hopeless. How valuable, then, that silent infelt influence that offers him the greatest of all rewards, — encouragement, — for want of which how many have perished. It is something that will rise superior to the sneering influence of those who, having gone through their initial stages, affect to decry the means which have helped them on. It is the influence of the first year that determines for good or ill the future career of many a student. Not only, however, to those who are entering on the medical profession, but to those who, having worn off the novelty, are anticipating struggles with those that they day by day come to look upon as sworn tormentors, and who are working now because they must work, the annual address comes as a spur, perchance a warning.

"So far, then, as the beginners and younger students are concerned, I can at least see that no harm is likely to come to them from listening to an 'introductory,' but rather, good. It should not be forgotten by those who advocate the abolition of our custom, that, though they are no longer susceptible to the influence of words of welcome, of encouragement, and advice, the boy from school, half bewildered by his novel surroundings and responsibilities, frequently values such help; and the man who enters on the study of our profession after a college life at one of our universities is in a wholly different mental attitude from the great majority of our first year's men. Within fair and legitimate limits I am of opinion that all means which may tend to ad-

vance the dignity of our calling in the eyes of our students are worthy to be pursued by us, their teachers. Compared with other professions ours is singularly free from ceremonial. I do not think we can afford to lose the little we possess."

There is truth in these views, but we doubt if the practical utility is of consequence. The scenes that have occurred of late years at London "introductories" have been far from edifying or suggestive of enthusiasm. An important lesson, and one that cannot be too early learned, is that medicine is a *sober* and painful calling. The very ones who are most influenced by enthusiasm are ultimately the most liable to discouragement. They are the ones *who sing*, —

> "Man is useless too,
> Be he saint or satyr;
> Nothing 's new or true,
> And — it does n't matter."

Let us glance at the glittering generalities of some of the other lecturers at the recent openings in England. Dr. Sawyer of Birmingham concludes as follows: "Look forward with confidence. Let the highest aims be yours. Let your minds be filled with a deep sense of your responsibility. Let your hearts ever grow in courage and in kindliness. Strive to discover the true and to practice the good. In such a spirit labor to profit by opportunity, and then

> 'The secret consciousness
> Of duty well performed; the public voice
> Of praise that honors virtue and rewards it, —
> All these are yours.'"

Mr. Evans, of Middlesex Hospital, speaks thus: "Give your skill and experience as freely to those who cannot afford to remunerate you as to those who can and do. Always bear in mind that you have to keep up your own reputation and that of the noble profession to which you belong; treat every one with whom you come in contact with the courtesy and kindness with which you would like to be treated yourself; and, even supposing that you do not meet with much substantial reward, you will yet have the satisfaction of feeling that you have done your duty fearlessly, honestly, and unselfishly."

True and good, every word of it; but would it not be better to tell the neophytes how little the substantial reward is likely to be?

Mr. Mason, of St. Thomas's, is quite glowing. "Let me add," he says, "in conclusion, to all who are now studying here, that whether your life be a success or a failure, I confidently hope you will never lose sight of the moral influence and discipline inculcated at this hospital. In life's campaign you will necessarily meet with many vicissitudes to impede your progress, and you will have to contend with and conquer numberless difficulties; yet, when the fiery fight is o'er, bear away the emblem of your victory, and you will, I feel sure, look back in your leisure moments with pride, reverence, and thankfulness to your Alma Mater, gratefully remembering the happy days you have spent here, and recognizing with intense satisfaction the many lifelong friendships that you have had the opportunity of forming."

We are growing cynical, perhaps, but after all is there not too much talk?

THE BOSTON DISPENSARY.

THE annual meeting of the Boston Dispensary Corporation was held October 17th. The summary of the reports is as follows: Number of new patients at the central office for the entire year ending September 30, 1876, 26,664. Of these, there were in the medical department, 17,893; surgical, 3431; dental, 3042; skin, 2122; nervous system, 176. Total number of visitors at the central office: medical, 51,557; surgical, 10,649; total, 61,806. The number of new patients treated in the districts was 19,927. The results were: discharged cured or relieved, 18,744; sent to hospitals or removed from the district, 663; died, 541; remaining under treatment, 108. Total number of cases at the central office and the districts, 46,591; number of cases of midwifery, 141; number of receipts, 109,245; average daily attendance during the year, 202.

The following appointments were made: Superintendent, William H. H. Hastings; surgeons, Thomas Waterman, Thomas Dwight, Charles E. Inches. George W. Gay; ophthalmic surgeon, William S. Dennett; physicians, J. Franklin Appell, Robert Disbrow, Reginald H. Fitz, Josiah L. Hale, William H. Baker, Orlando W. Doe, Joseph P. Oliver, A. L. Mason, Allen M. Sumner, Frederick W. Vogel, William C. Holyoke, Elbridge G. Cutter, George B. Shattuck, Robert M. Lawrence, Walter Ela, John Dixwell; department for diseases of the nervous system, Samuel G. Webber, David F. Lincoln; department for diseases of the skin, Francis B. Greenough; district physicians, John B. Fulton, Thomas M. Rotch, Edward F. Hodges, James B. Ayer, Edward H. Bradford, Frederick C. Shattuck, Abner Post, William J. G. Fogg, Thomas G. Reed.

MEDICAL NOTES.

— In its account of the annual meeting of the French Association for the Advancement of Science, the *Archives générales de Médecine* for October, 1876, notices a report by M. Letiévant upon resection of the upper jaw with preservation of the sub-orbital nerve. He called attention to the views entertained by physiologists, particularly by Longet, that the sensitive fibres exert a nutritive influence upon the muscles. He also compared the results obtained in an operation for the removal of the upper jaw where the sub-orbital nerve was preserved with one in which the nerve was destroyed.

In an operation where the nerve was destroyed no unfavorable symptoms supervened, except a slight attack of erysipelas. The patient recovered with a slight œdema of the cheek, but having the normal cutaneous sensibility. Eight months afterwards there was but little power of movement in the upper lip, and the patient was unable to inflate his cheeks and not let the air escape. Electrization of the muscles through the skin did not produce any contraction, nor did plunging electric needles into the substance of the muscles accomplish anything more.

In another case, where the sub-orbital nerve was preserved, its preservation was easy to accomplish, and scarcely increased the duration of the operation

when once the nerve had been laid bare and raised up. Three months after the operation all the muscles of the face contracted, sensibility, as shown by the æsthesiometer, was absolutely alike on both sides of the face. Pressure alone did not produce the same sensation, which could be explained by the destruction of the filaments of the anterior dental nerve. The recovery of the face was remarkable; cicatrization had taken place with a perfect preservation of the facial expression. Moreover, a fibrous mass had filled the cavity left by the removal of the superior maxilla.

The results of these two cases were totally unlike. While their comparison does not decide the physiological question, yet this ought to engage the attention of surgeons, with a view to establish the part which the sensitive nerve takes in the nutrition of muscular tissue.

— *The Lancet* of September 30, 1876, reports a case of popliteal aneurism, treated at St. Thomas's Hospital, in which recovery was brought about by the application of Esmarch's bandage for one hour, and of the tourniquet temporarily afterwards. The patient, a man aged thirty-two, on admission to the hospital had in the popliteal space a pulsating aneurismal tumor, two inches long, filling the upper half of the space, terminating opposite the junction of the femur with the tibia. There was also considerable œdema of the leg. On September 2d an Esmarch's bandage was applied tightly over the foot and leg up to the lower border of the popliteal space, carried lightly over the tumor, — a thin layer of cotton intervening, — and then continued tightly over the thigh to within three inches and a half of Poupart's ligament, where the upper end of the bandage was fixed with pins. The elastic ligature was not used. This was at two P. M. The bandage was left on for one hour, during which time the patient was very restless and complained of great pain. One third of a grain of morphia was given subcutaneously. At 2.55 P. M. a tourniquet was placed on the femoral artery, and Esmarch's bandange was removed. A second tourniquet was placed in position, to be applied alternately with the first. 4 P. M. No pulsation in tumor when the tourniquet was removed for a few moments. 5.45 P. M. Application of the tourniquet continued; no pulsation in tumor; leg slightly swollen; toes warm. 9.30 P. M. Until this time complete pressure had been kept up by tourniquets, but some flow of blood was now permitted. At 8.45 A. M. on the 3d, when all pressure was taken off, no pulsation was felt in the tumor. Tourniquet still applied lightly. At twelve, noon, there was no pulsation in the tumor, but the artery on the inner condyle pulsated. At seven P. M. the tourniquet was taken off. Aneurism cured. On the 10th the aneurism remained only a solid lump in the popliteal space, and over each condyle was a rather large artery pulsating very freely. The foot was not swollen, and the man was free from pain.

— *The Lancet* says that "the International Medical Congress at Philadelphia has proved a success far beyond the expectations of its most sanguine promoters, and deserves, therefore, a far fuller notice in our columns than space will permit.

"The cosmopolitan character of the representation at the congress testified better than words could express the world-wide interest which it excited. Disputes, so common in medical societies, were conspicuous by their absence

in the deliberations of this organization, whose very constitution was such as to insure its members being above the display of any petty jealousy. The most critical would have found it difficult to take exception to the excellent taste and hearty good-fellowship manifested in the address of welcome by Prof. Samuel D. Gross, M. D., D. C. L. Oxon.

"The address on medicine contained many facts of great historical interest, and whilst Professor Flint paid flattering tribute to the high place British medical literature had taken, he did not fail to do ample justice to the part played by America in the progress of medicine during the past century.

"The address on Hygiene and Preventive Medicine was delivered by Dr. H. I. Bowditch, who limited the age of progress in this department of medicine to the days subsequent to 1868. The orator awarded the palm to England, and, quoting the replies received to interrogatories, eliciting the present condition of sanitary progress, addressed to one hundred and sixty-seven men of intelligence, residing in thirty-eight States and nine Territories, and extending over twenty-five degrees of latitude and forty-seven of longitude, showed how very generally the importance of sanitary medicine is understood in the United States, and how indifferent both the local and central governing bodies are to the obligations it should impose upon them. The annual deaths in the United States of America from preventable disease were estimated at two hundred thousand. The importance of Dr. Bowditch's communication was so appreciated by the congress that a resolution was passed ordering that a copy be furnished to the governors of the various States, for transmission to the legislatures. A similar course was authorized with regard to the Provinces and government of Canada.

"The addresses on Medical Biography, Obstetrics, Medical Literature, and on Medical Education must have been highly gratifying to the national vanity, and on the occasion of the centennial anniversary were perhaps natural, though it is probable that, had the opportunity offered, most of the foreign delegates would have elected to spend the time occupied in hearing these addresses, which they could read subsequently, in the practical work of the sections, or even in visiting the Centennial Exhibition."

MASSACHUSETTS GENERAL HOSPITAL.

SURGICAL CASES OF DR. WARREN.

Cavernous Angioma of Lip. — July 26th, E. M., five years of age, came to the out-patient department, with a symmetrical oval swelling of the upper lip about the size of a small hen's egg. It was soft and fluctuating; the integuments were normal in appearance. It had existed for two years, and had been increasing steadily in size during that time. It had been operated upon once previously by acupressure. The patient was etherized, and the structure was burned with the galvano-cautery on the inside of the lip. To apply the cautery more effectually the hole made by the platinum point was enlarged laterally with scissors, and the whole interior of the growth burned with the platinum button. Some oozing remained, which was controlled by a small piece of sponge saturated with perchloride of iron, and pressure.

There was no pain or hæmorrhage following the operation; at the end of a week the wound was found filled with exuberant granulation, and a few days later an inspection of the lip revealed the presence of newly developed erectile tissue in the wound.

On August 6th, a brisk hæmorrhage occurring, the patient was again etherized, and the growth was tied in various directions by several double ligatures, inserted by long curved needles.

A week later a granulating mass appeared, shooting from the centre of one knot, and increased rapidly in size. This mass and an adjacent portion of tissue were carefully tied as before.

Ten days later the ligatures had come away and no return of the disease had taken place. The patient was discharged on September 3d, cured, and with little or no deformity of the lip, although so extensive an amount of tissue had been destroyed by the ligature and cautery.

Lipoma. — J. P., aged forty, entered the hospital August 12th, with a large pediculated tumor hanging from the right hip, the pedicle or fold of skin sustaining it being situated in the neighborhood of the sciatic notch. It was about the size of a baby's head, but had been considerably larger, according to patient's statement, previous to a severe hæmorrhage the week before. At that time, when the patient stood erect the tumor reached nearly to the knee. It was of fifteen years' duration, and no inconvenience had been experienced from it except at the time of the occurrence mentioned, although the patient had been engaged in active household duties.

To the feel the tumor was tolerably soft and slightly lobulated. At its most dependent portion was a small, round ulcer, and the skin about this was reddened and adherent to the parts below. The pedicle was tough and thickened, which fact suggested a deep attachment of the growth. This proved, however, not to be the case, as the tumor was easily removed under ether, by a few sweeps of the knife, two semi-elliptical incisions being made through the skin, around the pedicle, to save sufficient integument. The wound united partly by first intention and partly by granulation, and the patient left the hospital a few weeks after the operation.

Neuroma of Musculo-Spiral Nerve. — The patient, a middle-aged negress, had noticed for many years a small bunch on the outer aspect of the arm, a little above the elbow. It had always been tender on pressure, and occasionally pained her sufficiently to prevent her from attending properly to household duties. Had never received any blow on this spot to her knowledge, although, when a slave, had been whipped frequently. In her childhood she had had a fracture of the humerus, no evidence of which now remained. During the last few weeks the lump had been unusually painful and excessively so to the touch. The pain was entirely local, not extending along the course of the nerve. Local applications failing to give relief, the patient desired its removal. The patient being etherized, a vertical incision through the skin and muscles exposed a white, oval tumor, about the size and appearance of a pigeon's egg, apparently surrounding the nerve, which, however, was found to be merely flattened out on the lower surface of the growth, and was attached to it by a thin sheath of connective tissue surrounding both. The tumor was

readily separated from the nerve, about two inches of which had been laid bare by the operation.

The edges of the wound were brought together by sutures, and the arm placed in an internal angular splint. The wound healed almost by first intention, and in two weeks' time the patient was about her work again, using her arm with much greater freedom than before. A microscopic examination of the growth showed it to be a fibroma, which had been softened somewhat at the centre by recent inflammation.

"*Noli me Tangere.*" — Luther R., about sixty years old, entered the hospital June 21st. From his statement it seemed that one year ago a small wart appeared over his right malar bone. There was but little inconvenience experienced, yet the wart slowly increased in size, scabbing over and spreading along the edges, so that at the end of three months it was about as large as a silver half-dollar. The patient then began to seek advice, going, as he said, from one quack to another, and finally falling into the hands of a barber, about six months ago, who spent an entire day removing scabs and applying some kind of caustic to the exposed raw surface.

From that time the disease advanced rapidly, and has been attended with considerable pain. Now the inner portion of the right orbit is the seat of a deep and ragged ulcer, in some places two and one half inches in diameter; both lids are diseased, although on separating them the globe of the eye is seen to be uninjured and sight exists. The edge of the ulcer then runs along the eyebrow, down the middle of the nose, across the upper lip, to the outer side of the malar bone. The edges are red, indurated, and ragged, and the whole surface is covered with a cheesy, foul-smelling pus.

Over the right condyle of the jaw there are swollen and sensitive glands. The patient was in a very cachectic condition. Whilst under observation the disease seemed to be slowly advancing toward the left eye.

June 29th. The patient was suddenly taken with a series of chills, followed by a wild delirium, and died the following day.

The autopsy, performed by Dr. Fitz, twenty-one hours after death, showed that "the disease had extended through the right orbital plate in the pituitary fossa.

"The dura here formed part of the base of the ulcer. The inner surface of the dura showed recent false membrane, moderate in amount.

"The brain substance in general presented nothing unusual."

Fragments of the edge of the ulcer, examined under the microscope, showed the disease to be a large-cell epithelioma, similar to the variety found on the lip and penis. The disease had probably begun as a small-cell epithelioma or rodent ulcer, and had been stimulated by irritating applications into a more active cell growth. The occasional change from the less to the more malignant forms is noticed by Billroth and other observers, and is corroborative evidence of the malignant character of rodent ulcer.

LETTER FROM BERLIN.

MESSRS. EDITORS, — While on a pedestrian tour among some old Prussian towns, whose history is the political history of the Altmark of Brandenburg in the twelfth and thirteenth centuries, I found in the *Magdeburger Zeitung* of the 13th inst. items of medical interest from Halle, of which the following is a summary: Several new additions are to be made to the medical department of the university, namely, surgical, obstetric, medical, eye, and ear clinical buildings, and separate buildings devoted to anatomy, physiology, and pathology. All the clinics will be built on the pavilion plan, of which the surgical will be first erected; the directors' building is to be in the obstetric clinic. Professor Volkmann's surgical institute will be of stone, to which four pavilions are to be attached. In the main structure will be rooms for assistant physicians, nurses, and steward; also waiting-rooms, wards, and the operating theatre. The latter will be in the parterre, built out from the main building and raised, giving it every possible opportunity of light and air. A carriage is to run on rails to it from wards on the same floor, for transportation of patients. Each pavilion of the surgical institute is to have twenty-four beds and will represent a ward (*krankensaal*); it will rest on columns one metre high (about forty inches), giving it complete ventilation. The different clinics are to be isolated, with intervening parks. Walks of asphalt and granite will run to and between the buildings. For the transportation of provisions from the kitchen through the parks to the different clinics dog-wagons are to be employed, the fore and side walls of which are to be lined with hot-water pipes. The plan contemplates a completion of all the structures by the end of 1877.

The University of Halle was founded in 1694; its present buildings were erected in 1834; Wittenberg joined it in 1817. It is known as one of the smaller universities of Germany, as is that at Göttingen, but probably no other two have a greater repute for sound learning. Its library numbers two hundred thousand volumes. When the commercial relations of Halle, which have lately assumed some consideration, are not estimated, it will be readily seen that, in a city of fifty thousand inhabitants a university with eight hundred students, and with such a wealth in prestige, books, and money is the chief element in society. Halle will continue to be what it has been for two hundred years — an old university town, with all that that good English phrase implies. The "pietistic" notions, which it aimed to teach in the last century, are now not current, and its halls are more open to the foreign student in consequence. The multitude of American colleges in the heart of thriving business localities, dependent for life on private bounty, students' fees, and the poor economy of doing without apparatus and books, suggest to the medical essayist, by contrast with the Universities of Halle and Göttingen, a topic of profitable study, namely, Should the general government aid in the support of the higher institutions of learning, and, if so, how far should it pretend to their management, and at the same time take them out of the control of local influences and make them national?

On the 2d inst. the educational institutes for military physicians held their annual celebration. Germany has two schools of military medicine and sur-

gery, if the expression may be used with reference to the ultimate end of such instruction rather than to any intrinsic difference in the studies. These are the medico-surgical Friedrich-Wilhelms-Institut, founded by Frederick William the Third, and the medico-surgical military academy, whose courses of study are in preparation for the *sanitäts-officiercorps*.

The supervision of the reception of students is in the hands of the general staff physician of the German army, Dr. Grimm. The following technical points will interest two classes of your readers: those who are looking to positions in the military medical service, and those who are anxious for the better treatment of the army and navy medical corps at the hands of the general government.

Students in both these schools receive free instruction; the government assures in addition, in the Friedrich-Wilhelms-Institut, a free residence and thirty marks a month (a mark is equal to an American quarter of a dollar in gold); in the academy one hundred and eighty marks a year without a residence; on the other hand, the father or guardian must furnish clothing and books, and, in addition, if the student is in the institut, thirty marks a month; if in the academy, seventy-five. Besides, the father or guardian must promise to furnish two hundred and forty-five marks towards paying the expenses of the state's examination, and seventy-five more to equip the young man as a one year's volunteer (*freiwilliger*). At the end of a course of four years' study the students of both schools are put into the army with a competence as *unterarzt*, or under physician, a position of a probationary character, and not equal to that of assisting physician. After this the students of the institut are obliged to serve eight years as active military physicians, including the one year as *freiwilliger*, while those of the academy give four years of active service as military physicians.

It is easy to imagine, because every healthy German citizen is required, since 1870, to be a soldier for a definite length of time, that promotion is rapid. With the medical service such is, indeed, not the case. The government invites young men to the medical department of the army by a species of selection which tends to make this arm of the service aristocratic. Only those young men are eligible to a military medical education who are residents of the states of the German Confederation (Bavaria, however, is excepted, and claims none of the privileges of the confederation in this regard, on account of its peculiar military rights); they must prove their legitimacy of birth; must not be over twenty-one years of age; must possess a certificate of preparation for university studies from a German gymnasium of the humanistic type; or, more definitely, must satisfy the government of their having pursued the studies of the highest class of such gymnasium a full year. A parent or guardian is at liberty to choose either institute for his protégé, but with the distinct understanding that he must place the young man in the academy in case it becomes impossible for him to enter the Friedrich-Wilhelms-Institut. The general staff physician of the army reserves to himself, however, the decision of his assignment in the event of any question as to what would subserve the interests of the government. These two military schools held their year's celebration on the 2d inst., which was attended by an array of medical

celebrities in uniform and frock, among whom were Professors Virchow, Langenbeck, Bardeleben, Helmholtz, and Hoffmann; several generals of the army were among the invited guests. The festivities were opened by a choir of students, who gave a *salvum fac regem* as German students know how to do. Then Professor Bardeleben gave the address of the occasion upon a retrospect of the progress of surgery in the second half of the nineteenth century, of which the following is a summary. The chemist, Jackson, discovered ether as an anæsthetic; ophthalmology became a special science, and the ophthalmoscope found its use in laryngoscopy; medicine has become more surgical. Security rather than rapidity of procedure has become a fundamental principle of surgical operations. Invention has successfully found its way to methods of blood-saving in operations and treatment. Middeldorpf brought out the galvano-cautery as a destructive agent; at the same time Pravaz, of Lyons, introduced the subcutaneous injection of medicines. Compression of arteries by the screw or tourniquet, by weights, and by the fingers; the quiet position and retention of wounds, secured by stiff paste bandages, gutta percha, and gypsum, as an element in the healing process; their use as immobile dressings in fractures, the invention of which was credited to a military physician of Holland, though Dieffenbach, of Berlin, had already used them on the club-feet of children for overcoming deformity; permanent extension for restoration of form and position of a part; and antiseptic agents. These were the chief advances in surgery of the latter part of this century, as detailed by the speaker. Under the head of infection, the question was touched upon, how far moisture and air, alone or conjointly, help or retard the healing of wounds. Bardeleben regarded it as by no means conclusively settled, and disposed of it by calling it a question for the future. With more confidence, deduced from a large and successful clinical experience, and with equal conservatism, he believes that the future of surgery depends upon antiseptic methods of treatment. He paid a high tribute to the so-called "American barracks," or what we know as the "pavilion hospital," saying, among other things, that it was the ideal of a sick-room. Two years ago Professor Virchow, in his anniversary address on the same occasion, of which the subject was diseases propagated by vibriones, micrococci, etc., — infusoria known by the general name bacteria, — said of the American war of 1861, that however great the loss of life by sickness may have been, and it was proportionally very great, no country had left to military medicine such undying monuments of scientific achievements in hygiene, hospital construction, and the transportation of the sick and wounded. Let me add, in this connection, the voluntary testimony of one of the surgeons, in active service, to the Kaiser-Alexander-Garde-Grenadier-Regiment, a Prussian regiment named after its honorary chief, the Emperor of Russia. In private conversation with me, he said that it was in contemplation to build all the new military local hospitals on the American plan of the field hospital, and that several had already been erected for the Berlin garrison.

Bardeleben is about fifty years of age. His title is Geheim-Medicinal-Rath Prof. Dr., which will translate itself etymologically into Privy Medical Councillor. I dare not venture further with the comparison, appreciating the doubtful success of any American in elaborating the titular language of the Ger-

man court. Langenbeck's title is the same, only more so; that is, between its first two words should be written Ober, with a hyphen following. He is surgeon to the emperor and several members of the royal family. Bardeleben began his career as a teacher of clinical surgery. On the 3d inst. he was proclaimed rector of the university for the year beginning October 16, 1876.

In accordance with a law of all German universities, which prescribes the annual election of a university rector and dean in each of the four faculties of philosophy, theology, medicine, and law, Virchow was made dean of the medical faculty for the next year.

On account of the short summer semester, and the habit of the different departments to close the lectures with July instead of with the middle of August, the Minister of Public Education and Ecclesiastical Affairs issued a note to the effect that lectures should be given through the first week of August. As, however, students must pay a full month's rent for rooms used within that time, the audiences were very small, and in some instances in the law faculty the audience consisted of one student.

The renowned von Graefe is to be honored with a statue, which will stand on the Platz before the Charité. The committee in charge of the matter lately held a meeting in consultation, which was attended by the ophthalmologists of Berlin. Yours truly, MED.

BERLIN, PRUSSIA, *August* 26, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING OCTOBER 14, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	450	22.05	29.35
Philadelphia	825,594	310	19.52	22.24
Brooklyn .	506,233			24.92
Chicago . .	420,000	155	19.19	19.75
Boston . .	352,758	160	23.59	26 20
Providence	101,500			19.02
Worcester .	51,087	18	18.32	20.91
Lowell . .	51,639	25	25.37	20 55
Cambridge	49,670	18	18.85	23.31
Fall River	50,372	12	12.39	23.99
Lawrence .	36,240	11	15.78	25 96
Lynn . .	33,548			19.23
Springfield	32,000	8	13.00	20.93
Salem . .	26,344	13	25.66	22.92

Normal Death-Rate, 17 per 1000.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The stated meeting will be held at the rooms, 36 Temple Place, on Saturday evening, October 28th, at seven and a half o'clock. The following papers and cases will be read: Dr. G. W. Gay, Dermoid Cyst. Dr. J. Homans, Ligature of both Femorals for Double Popliteal Aneurism; Recovery. Dr. H. O. Marcy will exhibit a new splint. A. L. MASON, *Secretary.*

WE learn that William R. Warner & Co. have received the centennial award for their soluble sugar-coated pills. This is the third grand world's fair prize that attests to their excellence at home and abroad.

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THE FREQUENCY OF STONE IN THE BLADDER IN FINLAND.[1]

BY J. A. ESTLANDER, M. D.,
Professor of Surgery at the University of Finland.

To facilitate the explanation of the peculiar conditions attending stone in the bladder which exist in my native country, I will divide all cases of this disease, with regard to the ætiology, into two groups, the first including those cases in which there is no disorder in the urinary organs and the stone seems to be of constitutional origin, and the second those in which the calculi clearly depend on a local disorder. When cases of stone belonging to the first group are frequent in a country, and, on the contrary, are very rare or altogether missing in another country, then the endemic causes are clearly perceptible. But when the calculi originate in diseases of the kidneys, or are due to the many causes which prevent the bladder from completely emptying its contents, as, for instance, paresia vesicæ, or obstruction of any kind in the urethra, then the question arises, In what relation do these cases stand to the general endemic causes? Are they absolutely independent of them or not? For my part I am inclined to answer this question to a certain extent in the negative. It is true that the rich or so-called upper classes all over the world live pretty nearly in the same manner, and that they are, by this very manner of living, on the one hand more exposed to calculi, and on the other more independent of the endemic causes, than the lower classes. But nevertheless as the influence of climate, water, temperature, etc., is never completely to be avoided, they must, at least to a certain degree, be subject to the same epidemic laws as the other classes of the population. If I then suppose a country where no epidemic causes of stone in the bladder exist, we should there, as a general rule, entirely miss all the cases of constitutional origin, and find the cases of local origin principally amongst the upper classes, and less often than elsewhere. Well, this is just the case with Finland.

Some statistical figures collected from the case-books of the surgical clinic at the University of Finland for the last forty-four years will show the truth of this assertion with respect to the first group of calculi.

[1] Read before the International Medical Congress at Philadelphia.

During this period of nearly half a century only one case has presented itself, namely, that of a farmer, forty-one years old, whom I operated upon in 1863 for phosphatic stone in the bladder. This fact is the more remarkable as several such operations have been made in the clinic, but the patients have always been Russians, particularly from the province Jaroslaw. As Finland, with a population on December 31, 1875, of 1,829,919, has a surface of 6783 Swedish square miles (including Lapland), and the means of communication between the different parts of the country up to the last ten years have been undeveloped, it might be supposed that cases of stone had occurred in any of the eight provinces into which the country is divided without presenting themselves at the surgical clinic of the university, although it is the only special hospital in the land. To gain a decided conviction that this circumstance has not had any influence, I have communicated by letter with the surgeons superintending the hospitals erected by the government in each of these provinces, and they all returned the same answer, that for the last ten or fifteen years, during which they have been attached to these hospitals, they have never seen a case of stone in the bladder.

Cases belonging to the second group of calculi have been exceedingly rare amongst that part of the population which frequents the hospitals, and have been principally limited to stones depending on paresia vesicæ; not one single case of calculus renalis is recorded in the case-book of the surgical clinic. In my private practice I have had occasion to treat a great many cases of this kind, but all have been from the richer classes. Renal calculi have not been common, but not exceedingly rare, and amongst cases of vesical calculi, most of them depending on hypertrophy of the prostate, about twelve may have been my countrymen. I have no precise data for making a comparative estimate of this frequency, but it seems to me that the number is remarkably small to have occurred in a practice of seventeen years, during which time I have been the only *ex-professo* operating surgeon in the country.

From the facts I have just stated I think I am justified in concluding that stone in the bladder occurs in Finland almost exclusively in the upper classes, and originates most frequently in disorders of the urinary organs. It seems as if the causes of so pronounced an immunity for a whole country ought to be easy to discover, but such is not the case. Here as elsewhere, when we have to do with the ætiology of diseases, the facts we observe most probably are the result of many coöperating circumstances. As it would, however, be out of time and place to try to show here all that could possibly contribute to this immunity, I will only point out a few of the causes which seem to me the most important in this respect.

The water has always been considered as one of the principal causes, and I think that here it should have the first place. The land in Fin-

land consists principally of granite mountains, ground even during the glacial period, with extensive sand-heaths and barren lands, and this ground has the vegetation of many thousand years covered with a scanty crust of earth. The water in springs, rivers, and lakes contains therefore only a small quantity of alkaline salts. I will, as an instance, cite the following analysis by Prof. J. Chydenius of the water of the Wanda River, which supplies the water-works of Helsingfors.

One hundred thousand grammes contained seven grammes of solid matter, namely: —

Chloride of sodium	0.63 gramme.
Carbonate of lime	1.88 "
Carbonate of magnesium	0.81 "
Silicic acid	0.48 "
Organic humus-like substance	2.55 grammes.

The water in Finland is thus remarkably pure, and as the water forms the principal part of the nurture of a nation, we may consider this quality of the water as the chief cause of the immunity from stone in the bladder which my country enjoys.

The food of the Finnish people generally consists of cereals, fish, potatoes, milk, which is nearly always sour, and very seldom meat; in fact, I do not think that there is any other people who consume so much lactic acid and so little flesh. Another peculiarity worth mentioning is the habit of taking a bath in a room filled with hot steam. This habit seems to be as old as the Finnish people itself, and is so common that the poorest farmer never would neglect to take his bath once a week all the year round. It would, perhaps, not be difficult to find out some relation between flesh as food and the uric acid which forms the greater part of the calculi of constitutional origin, or to show a certain connection between the functions of the skin and the functions of the kidneys, but I prefer simply to point out the most striking features in the manner of living of the Finnish people, hoping that a comparison with other people enjoying the same immunity will show, better than any hypothesis, whether the national mode of life exercises any influence in this respect or not.

AN ABSTRACT OF PROFESSOR ESTLANDER'S REMARKS ON DR. J. J. WOODWARD'S PAPER ON TYPHO-MALARIAL FEVER.[1]

Professor Estlander stated that at certain periods the malarial fever was very common in Finland, particularly on the southern coast, and that at other periods it disappeared altogether. During the last years of the decade from 1850 to 1860 it raged there with great intensity, but from 1862 to 1868 it disappeared so completely that not one

[1] Read at the International Medical Congress.

single case was to be met with at the hospitals. From the last-named year until the present time it has again attacked that part of the country very severely, but it seems now to be fast decreasing. As to the endemic causes of this periodicity, the professor said he should regard them as in some relation to the atmospheric pressure, for when during the short summer the average stand of the barometer is high, the stand of the water is low, and the bottom of the sea is uncovered in the numberless small creeks and bays in the Gulf of Finland. No tide is perceptible there, and the bottom lies exposed in the sunshine, forming a rich source for miasmatic exhalations. When, on the contrary, the average stand of the barometer is low, all is covered with water, and the summer is rainy and cold, but free from this fever.

The abdominal form of typhoid fever may be called endemic in Finland, for cases of that fever occur every year, and at every part of the year, although sometimes with less, sometimes with more, intensity and frequency.

At periods when the malarial fever is very intense, cases are often seen exactly like those described by Dr. Woodward. These cases occur mostly in spring and autumn, and particularly in the month of August, which in that country of short summers is considered as a part of autumn. For this reason this fever commonly is called "Augustifeber." Professor Estlander added that the reporter has named this form of fever typho-malarial to designate it as a hybrid of the typhoid and the malarial, and that he was glad to accept this name and its signification. It is a well-known fact that during a period when the malarial tendency is predominant many diseases combine with this fever in a curious way, as, for instance, diarrhœa and bronchitis, particularly in children; and therefore such an association of these separate infections as the name typho-malarial implies has many analogies in pathology.

VAGINAL OVARIOTOMY.[1]

BY CLIFTON B. WING, M. D.

On February 10, 1876, I saw with Dr. Spalding, of Lowell (the physician of the patient), and my partner, Dr. Warner, a lady whose history was as follows: She was thirty-two years old, unmarried, and was never very strong. The menses began at fourteen, were always regular, but accompanied by considerable pain. Twelve years ago, at the age of twenty, after lifting a heavy weight she began to suffer pains in the back and across the lower part of the abdomen, which became much worse during the monthly period and had so increased that for the last six years the patient had been obliged to resort to the use of

[1] Read before the Suffolk District Medical Society, September 30, 1876.

morphine, and, at times, to etherization, when unwell. Five years ago a local examination showed a retroverted uterus, for which pessaries were tried without much result, and a year later a body was felt in Douglas's cul-de-sac, which was thought at the time, by Dr. H. R. Storer, who saw the patient, to be an ovary. For two years the patient was confined to her room, and part of the time to her bed, by her sufferings, but for the last year or two she has been better, and able to go about a little. She is habitually constipated, and defæcation, even after the use of enemata, is very painful. Micturition frequent, appetite poor, no febrile symptoms, patient emaciated and in a miserable condition.

An elastic but not distinctly fluctuating mass was felt in Douglas's cul-de-sac, pressing the uterus forward towards the pubes. The fundus uteri was turned somewhat backward, but was movable with the sound. The latter entered to the normal depth. With the patient under ether the tumor could not be pressed from its position, and previous efforts in the same direction had failed. Examination per rectum showed that the mass pressed the bowel against the sacrum, and explained the constipation and painful defæcation.

An aspirator needle was passed into the mass from the vagina, but only a small amount of dark, bloody fluid was withdrawn. Dr. E. G. Cutler kindly examined this and reported as follows: "The fluid (about two drachms in quantity) contained a large percentage of albumen. Under the microscope many red blood corpuscles were seen which had lost their characteristic shape and had become irregularly crenated. The surfaces of many showed a few spots not unlike small globules of fat[?]. In addition were seen numerous granular cells in various stages of fatty degeneration, varying in size from that of a white corpuscle to double that size. Hæmatin crystals; no others. Diagnosis of fluid, old hæmorrhagic effusion."

The tapping was not followed by any symptoms.

March 30th. The tumor remaining the same, the aspirator was again used, and this time several ounces of the same fluid were removed, and the mass much diminished in size. This second tapping was not followed by improvement; on the contrary, some time afterwards the patient began having occasional slight chills followed by fever, nausea, and headaches; in fact, a mild septicæmia. She continued to lose strength and appetite, though not confined to bed.

When next seen, April 19th, an examination showed the mass behind the uterus to be as large as ever, and more tense and cyst-like. Upon passing an exploring needle from the vagina, as before, a few drops of exceedingly offensive matter escaped. It was evident that the fluid must be thoroughly evacuated, whether it came from an old hæmatocele or from a hæmorrhagic ovarian cyst, one of which seemed to be present.

With the aid of Sims's speculum and position, the parts being well drawn down towards the vulva with tenacula, and care being taken to avoid wounding the rectum, an opening was made through the upper part of the vagina and the peritoneum into Douglas's cul-de-sac. Passing my finger through this I distinctly made out a small ovarian cyst, about the size of an orange, fixed in the cul-de-sac by some loose adhesions which easily gave way before my finger. The opening having been enlarged, the cyst was seized with strong forceps, opened and evacuated, then twisted to diminish its size, and pulled through into the vagina. There was no proper pedicle, but the uterus, tipping backward, allowed the broad ligament with the Fallopian tube to come well into the vagina. I intended here to apply a ligature and cut away the cyst, but Dr. Warner, in making a digital examination, finding the attachments loose, attempted enucleation with his finger, succeeded in separating the tumor, and brought it away.

There was some bleeding, which soon ceased entirely, and as the uterus went forward the broad ligament slipped back into the abdominal cavity. No ligature whatever was used, but, a coil of small intestine appearing at the opening, I inserted three silk sutures and closed the wound sufficiently to prevent hernia, but left room to pass a catheter, should there be any collection to wash out. The patient was then put to bed.

April 20th. Patient came out of the ether well, had no shock, and passed a good night with the aid of morphine. Reports no more pain than after the previous tapping. No bleeding, some slight chills, no nausea. Taking mild nourishment. Occasional shooting pains in pelvic region. Pulse 116 and good.

April 21st. Pulse 114, temperature 100¾° in axilla. Some abdominal distention and pain, and considerable tenderness, but patient moves limbs without much increase of pain. Thirsty, no chills, but nurse reports sweating. Tongue coated, and brown at edges. No appetite, but takes her food. Washed out cul-de-sac, using double catheter and getting away an ounce of fœtid fluid.

April 22d. Pulse 96, temperature 99½°, respiration 18. "Feeling better." Washed out more fœtid fluid. Menses appeared to-day, one week early.

April 23d. Pulse 96, temperature 100¾°. Poor night, with pain in lower abdomen, but better to-day.

April 24th. Pulse 96, temperature 99½°. Patient reports herself nicely. In washing out cul-de-sac, which is done daily, some sloughy tissue came away to-day.

April 25th. Pulse and temperature normal.

April 29th. Bowels have been moved twice by enemata. Pure pus came from wound, which is granulating. Removed the sutures. Cath-

eterization of the bladder, for a time necessary, now dispensed with. To have vaginal injections in place of the washing out with catheter.

May 6th. Touched granulations with caustic.

May 18th. Wound closed. Patient walking about the house, and dismissed.

Her rapid recovery was due in great measure to careful watching and faithful attendance on the part of Dr. Spalding after the operation.

I met the lady, for the first time since May, a day or two ago. She was no longer using morphine, and was increasing in weight and strength. The menses had been regular since the operation except within the last two months, when the flow had appeared every three weeks. This she attributed to the fact that, through illness in the family, the cares of the household had devolved upon her, and, as she expressed it, she had been obliged to be on her feet and running up and down stairs from morning until night. To the same cause she attributed a backache which she had had for a week or more, having been previously free from it.

Vaginal ovariotomy is an operation of recent date, having been first done by Thomas, of New York, who, February 6, 1870, removed a small ovarian tumor, tapping several cysts in so doing. The case was published in *The American Journal of the Medical Sciences*, April, 1870, and is quoted in full in Thomas's Diseases of Women, edition of 1875, where the author says of the operation,[1] "It is fully as easy of performance as abdominal ovariotomy, is evidently attended by much less danger, holds out to the patient the opportunity of avoiding many weary months of suspense in anticipation of that more grave procedure, is equally applicable to multilocular and to unilocular cysts, gives abundant facility for securing the pedicle, and is, so far as my knowledge and experience go, defensible as a surgical procedure against all but theoretical objections." "It is not my belief that the scope of this plan of performing ovariotomy will ever be very great, but I think in cysts of small size, which are unattached, it will offer a valuable resource for the avoidance of years of mental suffering while the disease is progressing, and of the capital operation of abdominal ovariotomy in the end, with all its attendant dangers and uncertainties. Even in a doubtful case, vaginal ovariotomy may be resorted to as a tentative measure, which, in the event of failure from the attachment of the cyst, would in all probability be recovered from."[2]

Dr. Peaslee, who was present at the operation by Thomas, did not form so favorable an opinion, and in his treatise on Ovarian Tumors writes as follows: "Upon purely surgical grounds, vaginal ovariotomy is, I think, hardly defensible, since —

[1] Page 738. [2] Page 735.

"(1.) It is practicable only in case of a very small cyst and while it gives no special inconvenience to justify interference in any way.

"(2.) It is more difficult than the ordinary operation of ovariotomy.

"(3.) It is performed before the cyst has acquired a distinct pedicle, and therefore the ligature cannot be applied with precision. If there be two or three cysts in the mass, especially if the case is one of polycyst, one or more of them will probably be left intact to undergo subsequent development, and it is impossible to determine beforehand that a given tumor is a monocyst.

"(4.) The operation is certainly not less dangerous than ovariotomy performed in the usual way while the tumor is small and without adhesion. I think it decidedly more so."[1]

Gilmore, of Mobile, operated successfully September 6, 1873, reporting the case in the New Orleans *Medical and Surgical Journal* of November, 1873. The tumor was of the size of an orange. He thinks Peaslee does injustice to the operation, and considers the vaginal operation safer than the abdominal, for the reason that the vaginal incision is made through tissues highly vitalized, which heal more readily than the abdominal incision; that it avoids fat and tendons, and gives better drainage; and also that "every practical surgeon knows that the more remote an incision into the abdominal cavity is from the diaphragm, the less the danger from acute peritonitis." Indeed, he formed so favorable an opinion of the operation that he proposed in the future, in case of a suspected unilocular cyst low down, to lay open the vagina, tap the cyst, and, if possible, extract in this way, holding the abdominal incision in abeyance.

Battey, of Georgia, March 30, 1874, removed a small ovarian tumor by the vaginal operation, the patient recovering,[2] and had, up to October, 1875, operated in this way, in doing the so-called "normal ovariotomy," nine times upon eight patients.[3] His first operation of normal ovariotomy was done by the abdominal incision, which he has since abandoned for the vaginal. He has had two fatal cases.

Perhaps as striking a case as any yet reported is that of Davis, of Wilkesbarre, Penn., who, in 1872, successfully removed an ovarian cyst weighing nine pounds through the vagina. In rupturing adhesions, which were abundant, his hand was passed high up into the peritoneal cavity, the sac extending several inches above the umbilicus, and forming a tumor about the size of a pregnant uterus at the seventh month of utero-gestation.[4]

[1] Page 321.

[2] Thomas, Diseases of Women, page 737.

[3] Battey's Operation. By Drs. Yandell and McClellan. American Practitioner, October, 1875.

[4] Transactions of the Pennsylvania Medical Society, referred to by Thomas in American Journal of Medical Sciences, July, 1876.

This shows that a large cyst may, even if adherent, be removed in this way, yet it is doubtful if any one who has witnessed the difficulties often encountered in separating adhesions when the ovariotomist has the advantage of a large abdominal opening, and can plainly see what he is doing, would wish to attempt a repetition of the operation. It is evident that adhesions might be separated through the large abdominal incision which would prevent the completion of the operation through the vagina, and adhesions are often met with when least expected.

The question of the advisability of the vaginal operation for ovarian tumors would seem to be limited to the cases of very small ones, particularly such as have not risen out of the pelvis, but this is the stage in which, as a rule, as Dr. Peaslee remarks, "they give no special inconvenience to justify interference in any way." If the tumor causes symptoms by its pressure it can, unless adherent, as in our case, be pressed up out of the pelvis, and be kept there by a properly fitted supporter, and the patient can be made comfortable. The majority of patients know nothing of the presence of the tumor while it is in this stage, and escape "mental suffering while the disease is progressing" unless some officious attendant tells of the discovery he has made.

The vaginal operation then is done when the patient is slightly, if at all incommoded by the growth, appears to her friends in good health, and would perhaps remain comfortable for several years; while, on the contrary, abdominal ovariotomy is performed at a time when the patient feels its necessity, and is anxious for relief from her constantly increasing sufferings, with death the only result if the operation is not resorted to.

If the former operation were much less dangerous, as some think, we should be justified in urging it upon the patient even when she is in the enjoyment of fair health, but this is by no means established. The reported cases are too few in number to settle the question. In our case suppuration of the cyst and the attendant condition of blood-poisoning made operative measures imperative, and after the peritoneum was opened, before which a positive diagnosis of ovarian cyst was impossible, the simpler method seemed to be to remove the ovary through the opening made.

The vaginal operation is certainly not easier, and complications are likely to prove more troublesome than with the abdominal opening. I think Dr. Thomas himself will now be ready to concede this, since, in his second attempt at vaginal ovariotomy, made to remove a large and tender ovary, recently related at a medical meeting in New York, he failed to get into the peritoneal cavity, the rectum and the posterior wall of the uterus being glued together by lymph. In attempting to separate them he broke through into the rectum, and finally, giving up the vaginal operation and closing the rectal wound with sutures, he

removed the ovary by the abdominal operation. In another attempt to open the peritoneum from the vagina, at which I was present, the operator, one of the most distinguished surgeons in the country, failed completely and was obliged to give up the attempt, although ascites was present, which theoretically should distend Douglas's cul-de-sac.

The trouble anticipated by Dr. Peaslee in regard to the pedicle does not seem to have been met with as yet. In our case there was no proper pedicle, yet the broad ligament was brought so far into the vagina that it could have been tied without great difficulty.

The fact that the intestine appeared at the vaginal cut is interesting, as lately some high authorities have held that the small intestine is never found in Douglas's cul-de-sac.

Vaginal ovariotomy has not been done as often for the removal of tumors as in the performance of "Battey's operation" or "normal ovariotomy," that is, "the removal of the ovaries," not necessarily diseased, "for the purpose of bringing about the change of life," as proposed by Dr. Battey in cases where this is deemed desirable. The same terms by common usage are applied to cases where the ovary is removed for neuralgia, etc., even when one only is taken away. It is a procedure the propriety of which is still "sub judice," and involving, as it does where both ovaries are removed, the unsexing of the woman, it will not be approved of by the profession generally unless it show unquestionable good results. In New York, where the operation has been done a number of times, the results, according to Dr. Mundé,[1] are not such as will probably lead to its abuse by repetition. It must be considered in the light of a capital operation. In one fourth of the cases of which I know, where the operation has been done, the patients have died, and recovery from the operation by no means implies that the patient was benefited. Among the reported cases a few brilliant results are to be found, and in some instances where death has resulted, after reading the histories of the patients the procedure seems justifiable, but in other cases the propriety of the operation may well be questioned. I do not believe Dr. Battey himself would have operated in all cases where his operation has been done.

In several instances where the ovary has been removed for the relief of pain referred to it, the patient has received no benefit at all, yet where both ovaries were removed she has been unsexed. One cannot but think it a serious matter to submit a patient to such an operation while our diagnoses and prognoses of the so-called "ovarian neuralgias" are as uncertain as at present. Everybody having experience in female diseases can call to mind cases where the ovary has been thought at fault until a correct diagnosis placed the trouble elsewhere. At best our knowledge is far from complete. To instance the looseness of views

[1] American Journal of Obstetrics, April, 1876.

upon the subject, one gentleman in the report of a case of normal ovariotomy writes as follows: —

"I do not believe that the removal of the ovaries could in any instance be resorted to with an expectation that the menstrual function would certainly be abolished, nor do I believe that normal ovariotomy would cure hysteria any more than ablation of the testicles would cure spermatorrhœa. . . . . Yet if I were dealing with an ulcer of the stomach or gastritis due to the menstrual molimen fixed in the solar plexus that could not be dislodged by remedies, and life were seriously jeopardized, I would entertain thoughts of normal ovariotomy."

It is to be hoped that this proposed method of treating gastric ulcers will not become popular.

In one case a surgeon removed both ovaries for what he was positive was "pure ovarian neuralgia." After the patient recovered from the operation she complained of the same pains, in fact declared them identical with those which she had had before. The gentleman now considered them "unquestionably hysterical," which might be termed a "diagnosis by *excision*."

Anxiety on the part of the specialist to perform great or rare operations whenever a possible chance offers is unfortunate, as nothing tends more to produce a feeling of distrust of the specialty itself among the members of the profession. "It must be conceded that to obviate by judicious treatment the necessity for an operation is more meritorious than to perform it well when required," [1] and the fact that we are obliged in certain cases to resort to the removal of the ovaries to help our patients is, as pointedly remarked by one gentleman, rather a reproach to medicine.

RECENT PROGRESS IN OPHTHALMOLOGY.

BY O. F. WADSWORTH, M. D.

Terminal-Corpuscles of the Conjunctiva. — Longworth [2] describes in detail the ending of nerve-fibres of the conjunctiva in terminal-corpuscles, which Krause first observed, and as to the existence of which there has been some controversy among histologists. He found the terminal-corpuscles in man nearly spherical, and was able to determine that the part within the sheath, the so-called inner corpuscle, is composed of closely-packed nucleated cells. In an appendix to Longworth's paper Waldeyer, who had previously denied the existence of the corpuscles, admits his error, and adds that he has succeeded in following the nerve fibrils within the corpuscle into immediate connection with the cells, and therefore these must be regarded as nervous.

[1] Allingham on the Diseases of the Rectum, Preface.
[2] Archiv für mikros. Anatomie, xi. 653.

Relation of Nerves to Corneal Corpuscles. — The varying accounts given by authors as to the method of termination of the nerves of the cornea led Koenigstein [1] to investigate the matter anew. To this end he macerated the cornea, previously colored with gold-chloride, for twenty-four hours in a solution of equal parts of hydrochloric acid and water with a little glycerine. By this means the basis substance of the cornea is broken up, and the corneal corpuscles and nerve fibres, intact even to their smallest ramifications, may be isolated and studied under the microscope. The coloring of the nerve fibres when thus prepared is still better than before maceration. Koenigstein was able to demonstrate in this way, in many instances, that very fine nerve fibres were in definite connection with the processes of corneal corpuscles, but could never observe that the nerve filament passed into the corpuscle itself.

The Length of the Emmetropic Eye. — The difference of refractive condition observed in the individual human eye, in a state of accommodative rest, is admitted in general to depend on variation in the length of the globe, not on differences of refractive power in the media or of curve in the refracting surfaces. Hirschberg [2] had the opportunity to measure the refraction of a blind glaucomatous eye with the ophthalmoscope, and a few weeks later to enucleate it for an inflammatory attack. The measurement of the enucleated eye gave a length of 23.75 millimetres, or from the anterior surface of the cornea to the bacillar layer of the retina about twenty-three millimetres. The refraction had been found during life emmetropic. This result would seem to show that the length of the optic axis in the schematic eye of Listing and Helmholtz, 22.23 millimetres, is somewhat too short. It may be noted also that Becker,[3] from objective examination of the originally emmetropic, aphakial eye, estimated its optic axis at 23.86 millimetres, and pointed out that, according to this estimate, the calculated focal distance of the crystalline in the living eye is considerably greater than that given by Helmholtz. A second eye, of which the refraction during life and the optic axis after enucleation were measured by Hirschberg, gave, however, allowance being made for the diminished length due to a low degree of hypermetropia, a more near accord with the length of the schematic eye than with the first eye referred to above or with the estimate of Becker. Evidently the question is not settled.

The Ciliary Processes during Accommodation. — A man in whom, besides other injuries, a mining explosion had caused the tearing out of the whole iris of the right eye through a wound in the cornea, gave Hjort [4] the opportunity to investigate the changes of form and position taking place in the ciliary processes during accommodation. The cor-

[1] Wien. acad. Sitzber., lxxi. 3.
[2] Centralblatt, page 40, 1876.
[3] Graefe und Saemisch's Handbuch, v. 436.
[4] Klin. Monatsblätter für Augenheilkunde, 1876, page 205.

nea, except for a laterally-situated cicatrix three millimetres in length, was clear; the interior of the eye, aside from the absence of the iris, appeared normal; vision was nearly perfect, and the range of accommodation but little less than in the uninjured and healthy eye. Repeated observations showed that, during accommodation for the near-point, the lens diameter was diminished, the ciliary processes moved forward and inward, while the distance between the processes and the edge of the lens remained the same. These changes were not instantaneous, but required an observable though short time for their accomplishment. Under the influence of calabar extract the changes were much more marked, and on forced accommodation even the bottom of the furrows between some of the processes could be seen. Especially distinct were the processes with focal illumination and the employment of Brücke's loupe. During complete paralysis of accommodation by atropine the processes were perhaps not quite so prominent, and the distance of the far-point was a little increased; the distance between the processes and the edge of the lens was unchanged.

These observations then agree entirely with the theory of the mechanism of accommodation advanced by Helmholtz. As to the behavior of the ciliary processes, they agree very nearly with the observations of Coccius, but are in direct contradiction to those of Becker, made on albinos. Becker, as is well known, found the ciliary processes to recede in accommodation for the near and under the influence of calabar paper, to advance under atropine or vision for distance. Unable to explain this disagreement with his own observations, Hjort also examined albinos, and the results he obtained agreed with his previous ones. Once only did it appear to him that on accommodation for the near the processes were drawn backward as Becker had stated, but it was soon evident that the recession was only apparent, and it was a slight movement of the eye which had caused the scleral border to hide more of the processes. The assertion of Coccius that during accommodation, although the ciliary processes approach the axis of the eye, the distance between them and the edge of the lens increases, was not verified; on the contrary, this distance always appeared the same, nor is it clear how such increase could take place without the assumption of a stretching of the zonula. That Graefe, in his oft-quoted case of aniridia, could perceive no change in the ciliary processes with accommodation may be explained perhaps by his not having used sufficient magnifying power, in part also by the non-use of calabar, which renders the change much more evident.

The Pulsation of the Retinal Vessels. — Jacobi[1] discusses the theories which have hitherto been offered in explanation of the pulsation in the vessels of the retina, and presents his own views. The question is of importance for the correct understanding of the internal circulation

[1] Graefe's Archiv, xxii. 1.

of the eye, and has as yet not been satisfactorily settled. The pulse in the veins, both on account of its far greater frequency and its purely physiological import, is much the more important. Regarding this, two theories, those of Donders and Coccius, have held a divided sway. Coccius considered that with each systole of the heart an increased amount of blood was forced into the closed capsule of the eye, and that the increased pressure thus produced would make its effect manifest on those parts which could most easily yield. As the veins satisfied this condition, so with each dilatation of the arteries and increase of pressure within the eye the veins must be compressed, and the flow of blood within them be quickened. Donders also assumed a rhythmical increase of pressure with each dilatation of the arteries entering the eye, and that this higher pressure, before it could be propagated through the capillaries to the veins, was in part transmitted to the vitreous and caused compression of the veins. But this compression would not affect all the veins alike; as the blood pressure is least in the main trunks, they must be compressed first, and thus the outflow of blood impeded. Room for the large amount of blood thus periodically present in the retinal vessels is made, according to Donders, by a decrease of blood in the vessels of the choroid, the anatomical arrangement of which he supposes to allow more easy exit of blood under strong pressure.

It is objected to Coccius that increase of intra-ocular pressure in fact produces a slackening, not a quickening, of the circulation, and, moreover, that sometimes besides the narrowing of the veins an evident damming of the current is present. A weakness of Donders's position is that it involves the hypothesis of a peculiarity in the choroidal circulation, nor is it plain why, if the choroid so readily acts as a regulator of the retinal circulation, the periodical checking of the current in the retinal veins is not avoided. Against both theories is the fact that the venous pulse is always confined within the limit of the papilla, generally within lesser limit, as at the edge of the central excavation. When the sharply-defined boundary of venous compression at these limits is observed, it is impossible to consider the phenomenon as only the expression of a general law according to which the blood pressure in the veins diminishes centripetally.

Jacobi holds that the venous pulse, so called, exists only because of the special anatomical structure of the optic papilla. That there is a rhythmical increase of intra-ocular pressure is taken for granted, and is sufficiently proven by the mere existence of the pulse, without other argument. Such pressure must cause a yielding (bulging) of the weakest part of the ocular capsule, and both an examination of the structure of the papilla and the evidence afforded by the changes occurring in glaucoma show that this is the weakest part. Now as a result of the yielding of the papilla the veins on its surface are stretched, and at the

same time bent on themselves, and the bending reaches a high degree where, as is frequently the case, they curve sharply over the edges of a central excavation. It is in these latter instances also that the venous pulse is generally most marked. The effect of the bending of the veins is to diminish their calibre and to admit the passage of a less amount of blood, and hence the part beyond the bend collapses, the degree of collapse depending on the sharpness of the bend and the relative height of intra-ocular pressure. Soon after the dilatation of the arteries the pressure in the vessels is equalized and the peripheral portion of the veins refills, while the elasticity of the papilla brings it back to its former level. The infrequency of a visible damming up of the blood behind the collapsed portion of the vein is accounted for by there never being a complete interruption of the current, by the short duration of the collapse, and by the minute quantity of blood held back.

What is ordinarily called the venous pulse of the retina is in reality, therefore, no true venous pulse, but an appearance *sui generis*. There are, however, two reported cases in which an actual venous pulse was observed. The doubtful character of one case renders a judgment as to the exact nature of the pulse uncertain. The other was one of aortic insufficiency, and there was probably a propagation of the wave impulse *a tergo*, as has been observed with this disease in veins of other parts of the body.

Arterial pulsation in the retina has latterly been divided into two distinct forms: the actual arterial pulse, found with insufficiency of the aortic valves, and in Graves's disease, also an intermittent influx of blood, seen in glaucoma, and exceptionally in other forms of disease, or on the production of artificial pressure on the eye. This distinction Jacobi believes cannot be strictly carried out, one form passing gradually over into the other, and he endeavors to show this by the results of experiment and observation. That there should be visible pulsation in the retinal arteries with aortic insufficiency or Graves's disease is not to be regarded as specially remarkable, since in the former throughout the whole body, in the latter in the head and neck, the pulse is transmitted with greater force to the smallest arteries. But the so-called intermittent influx also is a true arterial pulse. Here, from the impediment produced by increased intra-ocular pressure (or, exceptionally, from other cause), the central artery within the eye is narrowed, while without the eye it is excited to stronger pulsations, which extend a short distance into the retina.

Finally, the intermittent influx may be the visible expression in the eye of a general anæmia accompanied by an abnormally great rhythmical variation of tension in the arteries, as in aortic insufficiency.

(*To be concluded.*)

DISEASES OF THE URINARY ORGANS.[1]

THE title of this book may perhaps prove misleading, for, while it purports to treat of "diseases of the urinary organs," the subject-matter is really limited to "diseases, injuries, and malformations of the urinary bladder, the prostate gland, and the urethra," affections of the kidneys and ureters not being included. Looking further into the work, we find that urethritis is not among the diseases described. Chronic prostatitis, a well-defined and often intractable disease, is also omitted, unless, indeed, it may be recognized among the various and varying symptoms attributed to "prostatorrhœa," a disease first described and named by Professor Gross. In compensation for any such deficiencies, however, we have a chapter on the Lesions of the Gallinaginous Crest; moreover, the book contains a description of vesico-vaginal fistula, a subject of considerable importance, which is usually considered in treatises devoted to diseases of the female generative organs. As the volume comprises, with its index, five hundred and seventy-four pages, it would perhaps be unreasonable to call for more.

The preceding edition of Professor Gross's work on the urinary organs appeared in 1855, and, in consequence of the time that has elapsed since that date, and on account of the fact that the work has been revised and in great part re-written by Dr. S. W. Gross, the present volume may almost be called a new book. The impression which it produces is rather that of a careful compilation than of an authoritative exposition of ripe personal experience, such as we should have been glad to receive from Prof. S. D. Gross. Perhaps this feature, or lack of feature, is a result of the collaboration acknowledged in the preface; the circumstance of having delivered several courses of lectures upon the affections of the urinary organs might facilitate the preparation of a useful treatise, such as this will undoubtedly prove; it would, however, hardly qualify a younger surgeon to pronounce judicially, in place of Prof. S. D. Gross, upon the difficult and mooted questions of urinary surgery.

Among the doubtful points of practice in relation to which we should expect to find definite advice, based upon the results of personal experience, is the treatment of hypertrophy of the prostate, especially in its advanced stages. The internal use of ergot is recommended, on theoretical grounds, by reason of its utility in the treatment of uterine myomata, and as having proved successful in the practice of Dr. W. L. Atlee. We do not learn, however, what results Professor Gross has himself obtained by this means. "The only local treatment deserving of mention," continues the author, "is that by injecting the gland, through the anterior wall of the rectum, with solutions of iodine, to which attention has recently been directed by Professor Heine, of Innsbruck. . . . . This plan deserves a more extended trial, but the risks of suppuration, which is so frequent a result of injections into the parenchyma of other organs, must be borne in mind." There is nothing in the text to show that Professor Gross has attempted in his practice to verify the claims put forward in favor of this procedure. Professor Dittel, of Vienna, is far from pleased

[1] *The Diseases of the Urinary Organs.* By PROFESSOR SAMUEL D. GROSS. Third Edition, revised and re-written, by DR. S. W. GROSS. Philadelphia: Henry C. Lea. 1876.

with its results, suppuration having occurred in several cases, and one patient having died from the effects of the operation.

In the last stages of marked prostatic hypertrophy, with chronic cystitis and diminished capacity of the bladder, what are the available resources of treatment, and what procedure does Professor Gross recommend? In one place (page 54) perineal cystotomy is said to be peculiarly applicable to such cases; elsewhere (page 411) we read that "the permanent retention of a tube in the bladder above the pubes may be advisable to avert impending death." Which of these operations has yielded the better results in Professor Gross's experience does not appear. "When the obstacle to the passage of the urine depends upon enlargement of the middle lobe," says the author, "and the patient is in fair general health, I can see no objection to excising it." The operations of Guthrie, Mercier, and others for "bar at the neck of the bladder," are also sanctioned by Professor Gross, without discussion of their merits and without appeal to the results of experience. We know, however, that Sir H. Thompson speaks of these procedures in terms of the most unqualified disapproval, and that they are not recommended by Van Buren and Keyes.

Prostatorrhœa, first described by Professor Gross in 1860, is defined by him as "a discharge from the prostate gland, generally of a thin, mucous character, dependent upon subacute or chronic inflammation of the glandular elements of that organ, and liable to be confounded with other lesions, as gleet, seminal losses, and cystorrhœa, from which, however, it is usually easily distinguished." This new morbid entity would appear to be made up in great part by the association under one heading of several affections which are commonly described under distinct names by other authors. Thus, chronic prostatitis, both parenchymatous and follicular, cystitis of the neck of the bladder, and cystalgia, diseases attended by puriform or purulent discharges, frequency and difficulty of micturition, uneasiness and pain, as their chief symptoms, appear to be merged together under one common designation and symptomatology. We should be inclined to reserve the name proposed by Professor Gross for those cases in which the discharge "seems to be the result solely of a heightened functional activity, probably connected with if not directly dependent upon, disorder of the seminal vesicles, the urethra, neck of the bladder, or recto-anal structures; in other words, upon reflected irritation." Prostatorrhœa, so considered, is charaterized by a perfectly clear, viscid discharge, of intermittent occurrence. An important element in these cases is sexual hypochondriasis, as described by Sir J. Paget, which generally constitutes nine tenths of the diseased condition, the principal morbific agency concerned in the production of the symptoms being disordered sexual hygiene.

The chapters upon stone in the bladder are among the best in the volume, being clear and practical, and not overcharged, as is often the case, with details of which the interest is purely historical. We cannot, however, agree with the author in his estimate of the various operations for stone in the female bladder. The preference is given to lithotrity and to rapid dilatation of the urethra; the limits of safe dilatation are, however, not stated, and the reader is left to believe that calculi measuring, with the forceps, two inches in diameter may be successfully removed in this way. Simon's careful researches have shown that

a diameter of one inch is a limit which it is rarely safe to transgress, as permanent incontinence of urine may ensue. Of vaginal lithotomy Professor Gross says, "The operation may be required for very large calculi, in which dilatation is inapplicable, or in which the condition of the bladder forbids lithotrity, but it should not be practiced when it is possible to avoid it." We believe that the existing evidence and balance of opinion are rather in favor of this operation, compared with all other available procedures, and that it does not deserve to be looked upon as a mere *pis aller*.[1]

Coming now to the subject of stricture we find that Professor Gross indorses, to a certain extent, the views of Dr. F. N. Otis. Thus we read that "the object of any mode of treatment being the restoration of the normal calibre of the urethra, it naturally follows that no measure will be successful unless the size of the canal be previously ascertained in each individual case, and the contracted part be brought up to that standard. Hence a careful exploration should always be made with the urethrometer devised by Dr. Otis." In accordance with this view the practitioner must be prepared to stretch, split, or cut the urethra up to a calibre averaging 32.9, and in certain cases exceeding 40; for Dr. Otis's valuable researches, corroborated by the investigations of Dr. S. W. Gross and others, have demonstrated that such are the dimensions of the healthy urethra. But it still remains to be proven that the object of treatment should be "the restoration of the normal calibre of the urethra." If it can be shown to be true that by the complete division and dilatation of all strictures, however wide, up to the reëstablishment of the full normal calibre of the urethra as above estimated, a *radical and permanent cure* can be effected, then we shall admit that results now unattainable are placed within the reach of the surgeon, and we shall gratefully recognize that Dr. Otis has effected a considerable improvement of the means of treatment applicable to stricture. But demonstration, and not merely assertion, is requisite before it can be considered as necessary or even expedient to adopt such severe measures as those advocated by Dr. Otis and sanctioned by Professor Gross. Until experience shall have conclusively shown that the results of practice based upon these extreme views are superior to those obtainable by the less severe modes of treatment now in use, we shall incline to the belief that the restoration of a calibre considerably less than the full normal calibre suffices to afford all the benefit which can be derived from surgical measures.

"The meatus being the narrowest portion," says Professor Gross, "it is not the true index of the calibre of the canal beyond that point, and should not be used as a gauge for the passage of instruments, although a catheter which enters the orifice should pass readily into the bladder unless there be an obstruction." It is precisely because the meatus is the narrowest portion of the urethra that it has been proposed as an index or gauge for the calibre of instruments, since, as Professor Gross says, any instrument which can be passed through it should pass readily through the rest of the urethra. In this sense, and to this extent, the meatus is a true index of the calibre of the urethra beyond.

As regards the treatment of stricture, Professor Gross first speaks of dilata-

[1] See a paper on Vaginal Lithotomy, by Dr. J. C. Warren, Boston Medical and Surgical Journal, July 20, 1876.

tion as follows: "Notwithstanding the various attempts that have been made to supersede it, and the reproaches that have been cast upon it by modern writers, it still maintains its place in the estimation of enlightened practitioners, and there can be no doubt that it is frequently applicable to simple, soft, and recent strictures, while it is often demanded to prepare the way for other measures." Further on, however, he says that "the treatment by dilatation is, in the end, very unsatisfactory, relapses being the rule and complete cures the exception." We cannot say that we have a clear idea of the value which this mode of treatment possesses in the eyes of Professor Gross.

Divulsion is described, the instrument recommended being Richardson's modification of Perrêve's dilator. Professor Gross says, however, that instead of employing the ordinary form of dilator he has for several years divulsed strictures with heavy, conical, nickel-plated steel bougies. A series of these is described, of which the largest does not exceed number 30; it is evident that the "restoration of the normal calibre" of the urethra by means of this instrument must be quite out of the question, and the same may be said of almost every divulsing instrument that we have ever yet seen. "Six of these instruments usually answer every purpose," says Professor Gross, "and while they act equally as effectual [*sic*] as the divulsor, by being rapidly inserted one after another, they are, according to my experience, far superior to it, especially when the stricture is seated at the sub-pubic curvature, where, unless very great care is exercised, there is always danger in unskilled hands of the divulsor making a false passage." In the hands of one so skillful as Professor Gross we can imagine that divulsion so performed might be safe and perhaps effectual, but surely, if unskilled hands are to be provided with instruments, those of Voillemier or Maisonneuve, which Professor Gross does not mention, would be less dangerous than the conical steel bougie used as a divulsor.

"The mortality after operations on the urethra is generally due to chronic Bright's disease or pyelitis. Hence before entering upon any plan of treatment the prudent surgeon will test the urine for pus, albumen, and tube-casts." We must demur to this statement, inasmuch as it involves a mistaken view both of the name and of the symptoms of the kidney disease which is most to be feared in urinary surgery. The form of disease in question, namely, interstitial nephritis, acute and chronic, is not Bright's disease, and is not characterized by the presence of albumen or tube-casts in the urine. When its existence is suspected, the diagnosis, which may be very difficult or even impossible, must rest upon other signs than those of Bright's disease.

The book is well printed and illustrated, and would be a most useful addition to a medical library had it not been so recently forestalled by the admirable work on Genito-Urinary Surgery of Van Buren and Keyes, which, in our judgment, has rendered unnecessary for the present any other comprehensive treatise covering the same ground.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

JUNE 26, 1876. *Imperforate Anus.* — DR. AYER presented a specimen of imperforate anus and read the following paper: —

Within a few years the subject of congenital imperforate anus was presented to this society by Dr. Gay, who reported twenty-five cases, if I remember correctly, observed or collected by him. The whole evening was spent in the discussion of this singular arrest of development; its pathology, treatment, and prognosis were fully dwelt upon.

On that occasion I referred to two cases, which I had previously reported to this society, occurring in my own practice, both born of the same mother, with an interval of two years between the births. This was in 1858.

CASE I. In the first case I called in an eminent surgeon, who advised non-interference. The point of distended bowel was not distinct, and in an operation the incision must necessarily have been deep. The infant, a boy, was healthy in other respects, and nursed for the first two or three days. The urine passed freely. After the second day vomiting and abdominal distention appeared, and much suffering followed, which was allayed by paregoric and the inhalation of ether. After the third day the child neither nursed nor was fed, and died from exhaustion on the eighth day.

CASE II. About two years after, the same mother gave birth to a second child with the same affliction, who passed through the same course as the first, and died without operation for its relief, I think on the fifth day.

CASE III. Three years since a third case occurred, in a male child, presenting the same symptoms as detailed in the other cases. The anus had a slight thimble-like depression, and by pressure the finger felt the distended intestine, but at some depth. The abdominal fullness was great, with much pain.

On the third day I passed up a medium-sized trocar, puncturing the intestine at the depth of an inch or more. Through a canula a free discharge of meconium was effected. Subsequently the opening was enlarged by the knife, and a free discharge was established, greatly to the relief of the little sufferer. A rubber tube was afterwards employed. This worked well for one day, when pain and swelling returned, and death from peritonitis occurred on the fifth day.

CASE IV. Last winter another boy was born with the same difficulty. This was the mother's fourth confinement. The first child had imperforate anus, and physicians in the country where it was born, operated on it, but the little one after great suffering died on the eighth day. The last child was a male, and healthy, with the exception mentioned. The bowel was felt indistinctly at the bottom of the shallow depression which took the place of the anus. Puncture appeared impracticable, and no operation was performed. The baby died on the fourth day.

CASE V. My fifth and last case was a recent birth of a male child, the mother being a primipara. As no meconium passed, the anus was examined. was found to present a cicatricial appearance with no depression, and was im-

perforate. The urinary stains on the diaper were dirty, and spots of meconium were noticed also about the meatus and on the penis. The scrotum presented a peculiar look; the raphé was contracted, binding the bag down firmly on the median line, so that the testes hung down like saddle-bags. A small rubber bougie, and afterwards a catheter, were passed without difficulty; on the withdrawal of both they were found stained by meconium, but there was no clear urine. The diapers continued to be soiled by dirty urine. A larger catheter was passed the next day and drew a small quantity of pure urine.

After the second day the baby refused to nurse, vomited freely, and gradually sank away. The abdominal distention increased, and also the pains, which were relieved as heretofore by paregoric and ether.

On the fifth day an exploratory opening was made by the passage of a small trocar to the depth of an inch and a quarter; a little blood, but no meconium, followed. Death took place on the same day.

A large proportion of these cases has fallen to my lot; in a total of over two thousand cases of midwifery I have seen five cases of imperforate anus, or one in four hundred.

Collins observed but one case of imperforate anus out of 16,654 children born in the Dublin Lying-in Hospital during his mastership, and Zöhrer, of Vienna, found but two cases out of 50,000 new-born children.

West gives the following varieties of imperforate anus: (1.) Where a false membrane is in the canal. (2.) Where the natural aperture is absent and the rectum opens into the urethra, bladder, or vagina. (3.) Where a part or the whole of the rectum is absent, the canal terminating in a cul-de-sac.

In all three varieties the anus may be represented either by a trivial groove in the perinæum, or by a thimble-shaped depression of variable depth. Cases like the one shown to-night are the least favorable for operation. Of nine such cases which were operated on, only one proved successful. One case is on record where no operation was performed, the patient growing up to womanhood, and passing fæces through the urethra without great discomfort.

With the exception of those suffering from the simplest form of the malformation (when a thin membrane only separates the anus from the rectum), the little sufferers have rarely survived more than one or two weeks. Perhaps this is fortunate, for according to Guersant, if those patients who have grown up after a successful operation are consulted, they generally express regret that they have survived.

Death is usually gradual, from the aggravation of previous symptoms, but occasionally it occurs suddenly, in consequence of rupture of the over-distended intestine.

Dr. Cutler, who with Dr. J. B. Ayer had made the autopsy, showed the specimen, and reported that the child, otherwise well-formed, presented on examination the following internal appearances: On opening the abdomen the colon was found moderately distended with gas and meconium; the sigmoid flexure lay in the right iliac region, and was distended to the size of a silver dollar. The relations of the rectum and bladder were normal. An opening was made into the bladder, and the pubes and penis were carefully divided

from above down to the urethra; on making gentle pressure on the sigmoid flexure, meconium was seen to issue from the floor of the urethra, just in front of the *veru montanum*, and a little to the right of the median line in the membranous portion. The opening was circular, somewhat valvular, and readily admitted a probe of ordinary size.

The sinus of connection was slender, and perhaps a quarter of an inch long. This end of the rectum approached within one inch and a quarter of the perinæum.

Dr. Jackson said that this case was an interesting one to him, as it confirmed him in an observation of twelve to fifteen cases, that in every case of imperforate anus occurring in the male subject (otherwise perfectly formed), the gut opens into the membranous portion of the urethra.

July 24, 1876. *Imperforate Anus.* — Dr. Beach showed the dissection of a specimen of this deformity, which he had made in a case occurring in Dr. Tuck's practice. There was nothing unusual about the labor, except that after the head was born it required considerable force to deliver the body. A pouch which would admit the end of a finger was seen in the place of the anus, but it was a perfect cul-de-sac. A trocar was used twice without success, but the third time meconium was found and evacuated, high up and well to the right. The child lived twenty-four hours.

Dr. Beach made the following report of the autopsy: —

The bladder, vagina, uterus and appendages, kidneys, liver, and spleen were normal. There was no meconium in the abdominal cavity. The point where the intestine had been punctured was the centre from which recent inflammatory action had radiated throughout the abdominal cavity. The intestines were glued together by recent and old adhesions. No communication existed between the vagina and rectum. The latter was represented by a pouch, which would allow the forefinger to enter for an inch and a half, when it met an obstruction. This obstruction was relieved by carefully dissecting the intestines from their adhesions, so that a probe, entering the anus, could be made to traverse the rectal pouch above mentioned, and to enter the diminutive descending colon. The mucous membrane was continuous from the anus into the colon. Beginning at the point where the intestine was obstructed, it could be traced as the descending colon upward along the left side of the abdominal cavity to the spleen, when it made a turn to the right and became attached along the greater curvature of the stomach, forming the transverse colon. When it reached the right lobe of the liver it turned downward, became the ascending colon, and terminated in the iliac region at a small cæcum. Connected with the latter was a minute appendix cæci. The length of the large intestine was sixteen inches, and its diameter a quarter of an inch. The appendix measured one and a quarter inches in length, and one sixteenth of an inch in diameter. The colon contained a little mucus, but no meconium. The small intestine, of nearly double the calibre of the colon, commenced at the cæcum, and forming a mass of convolutions, in bulk the size of a hen's egg, extended upward to the inferior surface of the liver, where it terminated in a blind extremity, and was not connected with the stomach. The stomach opened by its pyloric extremity into a section of intestine a yard and a half

long, varying from half an inch to an inch and a half in diameter, and also terminated at the iliac fossa in a blind extremity, not connected with the colon or small intestine described. This portion of the intestinal canal contained all the meconium. It was coiled up irregularly, and was the first object noticed upon opening the abdominal cavity. The blind extremity just described was the portion of the intestine from which meconium was withdrawn at the time the third puncture was made.

Popliteal Aneurism. — Dr. Warren reported the case, which came under his care on August 25th. W. Y. was wounded fourteen years ago at the battle of Fredericksburg by a musket ball, which entered the calf of the left leg, a little to the inside, and came out opposite the inner aspect of the knee-joint. There was no unusual amount of hæmorrhage at the time, and the wound healed well, but on recovery a small bunch remained in the popliteal space, growing larger at times, and again almost wholly disappearing. One year ago it grew larger than before, and began to pulsate. It soon filled the hollow of the knee, and during the last two months has spread rapidly on the inside of the thigh. The skin over the popliteal space is made tense by an ill-defined pulsating mass which spreads along the course of the femoral artery to within eleven inches of the anterior superior spinous process of the ilium. The left knee is nineteen inches in circumference, while the right knee measures but thirteen and one fourth inches. The patient suffers severely from pain in the calf and foot, which is relieved only by frequent subcutaneous injections of morphine. A pound cannon-ball applied to the femoral diminishes but does not arrest pulsation in the vessel. Heavy pressure with the hand arrests pulsation entirely.

August 30th. The patient was etherized, and pulsation in the femoral was arrested by two hospital tourniquets applied, near the apex of Scarpa's triangle, alternately every fifteen minutes for twelve hours. During this period the patient was kept profoundly etherized, about a pound and a half of ether having been consumed for the purpose, with the exception of a few minutes during the afternoon when some beef-tea and brandy were administered. The pulse during this time gradually rose from the normal rate to about 120, but subsided somewhat after nourishment had been taken. On removing the tourniquets pulsation had ceased, although on auscultation a slight murmur was heard beneath the tumor. At midnight there was no return of the pulsation, but the next morning a slight pulsation was observed, which gradually increased to its previous force.

September 10th. Pressure was applied as before by tourniquet without ether, the patient preferring to bear the pain, and was continued for twenty hours, but had no effect upon the pulsations, which reappeared after it was removed.

September 19th. The patient was etherized, the sac laid open, the clots, which were numerous, everted, and the artery tied at each end. It was found that the sac extended to the point of bifurcation of the popliteal artery. Two ligatures were therefore necessary at this point.

The patient rallied well from the operation, and for the first week the wound healed rapidly. An attack of erysipelas arrested the healing process and reduced the patient greatly. On October 3d hæmorrhage occurred from

the upper end of the wound during the afternoon, and although digital pressure was immediately resorted to by an attendant, and in a few minutes the tourniquet was applied, the patient sank and died the same evening.

Dr. Fitz showed the specimen, which consisted of the aorta from its origin, the left femoral, and a portion of the aneurism in continuity. The fatal hæmorrhage had resulted from the sloughing of the walls of the artery at the upper end of the aneurismal sac, where the ligature had been applied. There was no alteration of the inner surface of the femoral artery, but the fibrous tissue was indurated around it, corresponding with the region where compression had been applied. The entire inner coat of the thoracic aorta was thickened, wrinkled, elevated in patches, of an opaque grayish-white color, and the canal was dilated, especially that of the arch. Just above the cœliac axis these alterations ceased abruptly, the interior of the abdominal aorta being smooth and yellow, its walls evidently in a normal condition. The specimen was particularly interesting from the absence of changes at the point of compression and the presence of chronic inflammatory conditions of the thoracic aorta, such as are associated with the formation of aneurisms, in a young man in whom a popliteal aneurism had arisen, directly or indirectly from a traumatic cause.

AN ABORTIONIST SENTENCED.

We are glad to learn that David R. Brown, the abortionist, has at last met some small part of his deserts. He was convicted in March, 1875, on two counts for abortion, and filed exceptions, which the supreme court overruled. On October 25th he was brought up for sentence. His counsel, according to the custom which makes it the lawyer's duty to take the part of the convicted criminal against the public good, asked for a light sentence, giving as his reasons that Brown had already suffered two years' imprisonment since his arrest, that he is seventy years old, and, most wonderful of all, that the offense is not an uncommon one. We should think this a reason for severity, as truly the crime is far from a rare one, and will, we imagine, hardly become rarer through leniency. He also, queerly enough, pleaded that Brown had already suffered the extreme penalty of the law on conviction for a similar crime several years ago, which to the non-legal mind will hardly appear a mitigating circumstance.

The judge sentenced the prisoner to three years in the state prison on each count. The loose way in which pardons are granted makes us fear that this may not mean as much as we could desire. Abortionists are seldom without money and interest, and we fear that we shall read some fine morning that "Dr." Brown is at large again, and not improbably appointed a coroner.

MEDICAL NOTES.

— Dr. Thomas Dwight has resigned the professorship of anatomy at the Medical School of Maine after five years' service, and Dr. Stephen H. Weeks, of Portland, has been appointed lecturer in his place.

— In our last number we published an advertisement of the Warren Triennial Prize. This is one of the largest prizes in the country, and should draw out good original work. We would remind our readers that essays must be sent to the resident physician of the Massachusetts General Hospital on or before February 1st.

— Professor Lücke, of Strasburg, has been invited to the chair left vacant by the death of Dr. Simon, of Heidelberg. Several of the Alsace journals have published his acceptance, which has been emphatically denied by the Strasburg papers. A telegram of the 8th of October from Stuttgardt semi-officially announces Professor Lücke's acceptance, with the comment that his decision was influenced by the prospect of large new clinical buildings, ground for which will be broken early in November.

— *The Medical Times and Gazette* states that an interesting case of hydrophobia from the bite of a cat was recently the subject of a coroner's inquiry in Manchester. The following notes are abridged from an account kindly furnished by Mr. R. B. Smart, the surgeon in attendance: On July 22d a salesman named McNaught, aged thirty-three, was bitten in several places on the forefinger of his right hand by a strange cat which had taken refuge under the slopstone of his kitchen from a troop of children. The wounds were cauterized, and all of them healed except one at the root of the nail, in the neighborhood of which a small abscess eventually formed. On September 6th, a few days after this abscess was opened, Mr. Smart was summoned to the man's house. He found him complaining of some uneasiness in the finger and arm, and alarmed and agitated in his manner. For several nights he had slept but little, walking restlessly about his room, and even occasionally up and down the street; and his whole demeanor had been noticed by the neighbors to be altered and strange. His pulse was 80. On being requested, he swallowed some liquid food, but he did so reluctantly and in sips. He passed the night on the sofa, and, under the influence of a full dose of chloral, slept for several hours. In the morning he took some bread and milk, complaining that he found it difficult to swallow. He talked in an excited manner; his pulse was about 90, his temperature 98.5°. A few hours later he became incoherent and still more excited. He refused to take food when people were looking on, but would now and then go out into the lobby and swallow a little liquid there. Occasionally he struck himself over the upper part of the chest, although he declared himself free from pain. At bedtime morphia was administered subcutaneously, and the night passed quietly. On the following morning, September 8th, he altogether refused to swallow, and became greatly irritated when urged to try. In the afternoon he suddenly became very violent, and attempted to get out of the window. He talked incessantly, and thought those around him were conspiring to take his life. He had a savage look, and made threatening gestures as if to strike. Later in the day he is said to have spat upon his attendants, and the surgeon himself saw him apparently preparing to do so. He ordered all vessels containing food to be taken out of the room. During the night his violence increased; he foamed at the mouth, and repeatedly put his hands up to his throat. Early in the morning of September 9th he died, without any symptom of convulsion, and recognizing the bystanders

to the last. At the post-mortem examination, conducted by Mr. Thomas Jones, Medical and Surgical Registrar at the Royal Infirmary, there was found marked congestion of the veins on the surface of the brain, as well as of the vessels in the brain-substance. There was no softening or exudation. Nothing abnormal could be detected in the condition of the throat. There were some old pleuritic and pericarditic adhesions, and the aortic valves were thickened. All the other organs were healthy.

— We quote from the *British Medical Journal* the following items in connection with the Bravo inquiry. "The opening of the medical season is marked by a choice piece of gossip for *quid-nuncs* in the reference by Sir William Gull to the Censors of the College of Physicians of London of the questions of professional conduct raised by his statements in evidence at the Bravo inquest, and by the public comments on them in the medical press, as well as the privately expressed opinions which have been current in the profession. It is well known that Sir William Gull does not admit the justice of the censures which have been inflicted upon him unofficially; and he now seeks, by an appeal to the college, not only to set himself right, but to shift the burden of blame on to Dr. George Johnson. Sir William complained that the counsel who reëxamined Dr. Johnson put a false interpretation on his (Sir William Gull's) evidence; and that Dr. Johnson, by not correcting, confirmed this misinterpretation. He has, therefore, taken the offensive at the college; and it is now Sir William who appears as the complainant. The Board of Censors of the college, which includes the president (Dr. Risdon Bennett), Dr. Peacock, Dr. Radcliffe, Dr. Wilkes, and Dr. Bristowe, have had the statement and rejoinder of the two physicians before them in writing."

— The following extract from a recent number of *The Lancet* shows the difficulty experienced in England in the attempt to restrict the sale of poisons: "It is beyond question that the law regulating the sale of poisons requires revision, and needs, as a whole, to be placed on a better footing. At present it fails to deal with the facts of retail trade in drugs which are capable, in sufficient doses, of destroying life. For example, in a late number of the *Western Morning News* was a letter signed by a local chemist to the effect that he frequently supplies customers with 'a pint or more of laudanum at a time.' Laudanum is, by the act, required to be labeled, but not *registered*. In many districts the practice of taking laudanum is common, and by long use or abuse of the drug those who employ it have come to require large quantities. It might act as some check on this injurious custom if the names and addresses of persons habitually using the drug were registered, together with the quantity purchased. As a matter of fact, we believe most of these laudanum-drinkers now carry on their practice with great if not perfect secrecy. The sale of all poisonous drugs should be recorded. The trouble would be small, the service rendered considerable. It is alleged that the act is commonly evaded. Security might be taken against that evil by establishing a system of supervision, tracing the quantities of poisonous drugs in stock, after the manner pursued for the protection of the revenue and excise. No difficulty thrown in the way of a reckless use of 'poisons' can be considered a hardship."

— *The British Medical Journal* says with regard to the supply of subjects for dissection, "The effort now made by the authorities of the metropolitan medical schools to have a supply of bodies for dissection, upon which the students may commence their labors at the beginning of the session, is highly commendable. The result contrasts most favorably with the state of affairs which obtained only ten or twelve years since. Then it was unfortunately customary for students to have to wait many weeks after the commencement of the session before they could obtain 'parts.' This year, in London, nearly eighty subjects were ready for dissection on October 1st at the various schools, Guy's having fourteen, St. Bartholomew's and St. Thomas's eleven each. The difficulty in obtaining bodies is increased by the fact that the session opens just at the termination of the hot period of the year. Consequently we find that all the bodies have been preserved, though the exact method of preservation is different at almost every school. All the plans adopted seem to answer fairly well, and furnish students with material for work, so that they need not waste the precious first weeks of their too short session. In all cases the vessels are injected, but the subsequent treatment of the 'subject' varies considerably. At St. George's Hospital, for instance, the bodies are kept in pickle in large tanks until required for use. The only real objection to this plan appears to be that the muscles of subjects kept so long in the liquid lose their color. In other cases, as at St. Bartholomew's, the bodies, when once fully injected, are simply exposed to the air. In this case the hands, feet, and other regions are apt to become very dry. Perhaps the plan adopted at the Middlesex Hospital is about the best. In this case the body is injected with some preservative fluid, is then placed in a shell, surrounded with a thick layer of sawdust made damp by a strong solution of carbolic acid, fastened down, and kept in this state until required for use. The subjects then come to the table moist, of good color, and free from smell. Certainly any plan which tends to mitigate the unpleasantness of the dissecting-room is, especially to fresh men, a great boon."

— *The Lancet* reports the following case of manslaughter by rupture of the spleen. A curious medico-legal point was involved in a recent trial for manslaughter in Ceylon. A coolie, in consequence of alleged impertinence, was treated with some violence by the superintendent of a plantation, and died almost immediately from, as the post-mortem examination showed, rupture of the spleen. The man had had fever lately. The spleen was large and soft; it had ruptured, and the peritoneal cavity was full of blood. It was urged for the defense that the spleens of coolies sometimes rupture spontaneously on severe muscular exertion, that the exertion of running away, as the coolie did, might have ruptured his spleen, and that death therefore would not be the direct result of the action of the accused. Dr. Norman Chevers was quoted in support of the theory that the spleen might rupture under such circumstances, but it was discountenanced by the medical witnesses, and we think rightly. An accident so rare, and even doubtful, as such rupture of the spleen must be, cannot be allowed weight in the presence of evidence of direct violence. The chief justice ruled that, even if the diseased spleen would have caused the man's death sooner or later, the rupture was so distinctly the result of the violence

that the prisoner could hardly have been acquitted of the charge of at least accelerating the death of deceased, and thus of manslaughter. The jury found the prisoner guilty, and he was sentenced to eighteen months' imprisonment with hard labor.

MEDICAL CONGRESSES.

MESSRS. EDITORS, — I confess I have not been able to acquire a very clear comprehension of the utility of medical congresses, institutions originating, I believe, in Germany, and imported into Great Britain, France, and America with an undue enthusiasm, which, as usual, has sensibly abated. Do not the academies and other existing scientific societies suffice for the utterance of all new ideas, the publicity of all scientific labors of real value? These great nomadic improvised reunions might have had a certain importance and value in earlier times, when international relations were less intimate, and when the costliness of books and the want of scientific journals made the intercourse of savants very difficult. During the Middle Ages, as in antiquity, men who devoted themselves to the advancement of knowledge had to travel personally to seek for it wherever they might hope to find it. They went to foreign lands, often crossing the seas to distant countries, passing from city to city, learning everything that was new, and finding their acquisitions augmenting in proportion to the length and extent of their pilgrimages. In the last three centuries savants have traveled less. They have supplemented peregrinations by private correspondence, a custom to which we owe much precious biographical, historical, and scientific information. In our day these systematic correspondences have well-nigh ceased. Thanks to the multiplicity of special journals, to the publication of the proceedings or transactions of learned bodies, and to the abundance and reasonable price of books, we are not obliged to travel far to learn what the post will deliver daily at our domiciles. In this respect the same phenomena are observed in the sciences as in material industries and commerce. The multiplication of permanent markets, and the facilities for intercommunication have gradually suppressed peddling, or colportage, and, in a great measure, fairs, which are but temporary markets, whither people go to procure periodically an outfit. Nowadays products seek the consumer wherever he is to be found.

Scientific congresses are only, if I may be permitted the comparison, fairs for intellectual products. Their organization, in this view, is hardly appropriate to our civilization, but recalls ruder epochs. Hence we now find them disappointing. They are reunions for parade, where there is much noise and bustle, and multitudes collect, and having unbosomed themselves leave as little trace in science of their passage as at the hotels at which they have lodged. The travelers who assemble at such conventions are not always those we wish most to see. The works they display have nothing to distinguish them from those made known elsewhere by the ordinary channels; and many, unless discharged through these communal word-spouts, would be in grave danger of remaining forever unpublished. What can possibly result, if we look at it seriously for a moment, from these fortuitous agglomerations of several hun-

dred pundits more or less devoted to the various branches of medicine, surgery, or the biological sciences, for the most part unknown to each other, assembled for five or six days only, most of which are absorbed by the formalities of organization, by addresses of welcome and addresses of grateful appreciation, by the ceremonial of meetings, and by debates on questions of order? What possible good can come of the reading of a score of papers that have not been subjected to any critical analysis, that are in no way correlated, that are sprung on the assembly and forgotten as soon as heard, unless possibly followed by some desultory discussion, improvised and vapid? It is true that at the close of these imposing reunions a volume of *transactions* is usually published, giving an analysis of the works presented and of the discussions, or printing them in full; but all that is read and said in these œcumenical councils hardly surpasses in quantity and assuredly does not equal in quality what is produced weekly or monthly in the learned societies of the great scientific centres. The results do not correspond to the huge preparations and vast paraphernalia of these solemn assemblages. I do not believe that these organizations, founded on no real want and destitute of obvious utility, will be enduring. They have this only merit, that they serve as means of pastime for amateurs in science, or even for professional savants, an agreeable rendezvous for a certain class of persons, who enjoy them as others do Saratoga or Newport.

Let me not go, however, further than equity demands. If the utility of these congresses be not demonstrated, it may be supposed that their comparative innocuity should be conceded; and it is something to be harmless. Yet it may be questioned whether their influence upon the tone of the profession is altogether good, when suitable precautions are not taken to prevent mountebanks and charlatans from availing themselves of the sessions of these august bodies to advertise their special modes of cure; or when, as at the late International Congress in Philadelphia, the reporters are allowed to submit a series of *conclusions* to a *viva voce* vote, requiring the congress to decide off-hand on some of the most difficult medical problems, of which many in the present state of our knowledge are insoluble, while the thoughtful members of the minority have no means of recording their protest and dissent. It may be argued, also, that it is well from time to time to take, as it were, an inventory and account of stock of our acquisitions, and that summaries of progress in the various branches of medical science and art, especially of such as have been made by native investigations, must be instructive and encouraging. But in this centennial year the journals have teemed with such retrospects, and their value much depends on the capacity and knowledge of the reviewer. What we are to think of the appreciation of a critic who laments that our great pathologist has done so little for the study to which his life has been devoted has recently been indicated by a brilliant pen in the pages of the JOURNAL. If these faults could be corrected, and these reunions regarded as mere scientific festivals, analogous to the annual meetings of our academies or other learned bodies, we might be altogether reconciled to them as promoting good feeling, and, if not science itself, at least a taste and predilection for scientific activity. And as everything that favors the propagation of enlightenment is good and worthy of encouragement, we could say, *Pax hominibus bonæ voluntatis!*

ASTERISK.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING OCTOBER 21, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	467	22.88	29.35
Philadelphia	825,594	293	18.45	22.24
Brooklyn .	506,233	181	18.59	24.92
Chicago . .	420,000	170	21.05	19.75
Boston . .	352,758	147	21.67	26.20
Providence	101,500	46	23.56	19.02
Worcester .	51,087	15	15.26	20.91
Lowell . .	51,639	18	18.13	20 55
Cambridge	49,670	12	12.56	23.31
Fall River	50,372	14	14.45	23.99
Lawrence .	36,240	7	10.04	25.96
Lynn . .	33,548	21	32.55	19.23
Springfield	32,000	3	4.81	20.93
Salem . .	26,344	13	25.61	22.92

Normal Death-Rate, 17 per 1000.

OBITUARY.

In the death of Dr. A. G. Walters, of Pittsburgh, Penn., which occurred recently, the profession has lost a bold, independent, and successful surgeon. He was a native of Prussia, and a graduate of the University of Berlin. He came to this country in 1836, after having attended the lectures of Sir Astley Cooper. He early attained proficiency and success as a surgeon, and long held a leading position in the section of country where he lived. Dr. Walters published, in 1868, a remarkable paper on the Treatment of Compound Fractures by Free Incisions through the Fasciæ, which in its boldness and success resembled the earlier treatise on Compound and Complicated Fractures of the late Dr. William J. Walker, of this city. His mental vigor, independence, and peculiarities strongly recalled the characteristics of the distinguished surgeon last named. He recently published, in the *Archives of Clinical Surgery*, a remarkable and successful case of section of both femurs for deformity. Although at the ripe age of sixty-five, he was still in full and active practice when he died, after a brief illness incurred in the pursuit of his profession. DAVID W. CHEEVER.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening, November 6th, at eight o'clock, at its rooms in Temple Place. Dr. Dwight will read a paper on Some Points of Hip Disease.

BOOKS AND PAMPHLETS RECEIVED. — Public Libraries in the United States of America. Special Report. Department of the Interior, Bureau of Education. Part I. Washington: Government Printing Office. 1876.

Series of American Clinical Lectures. Edited by E. C. Seguin, M. D. Volume II. No. 8. The Hypertrophied Prostate. By Robert F. Weir, M. D. New York: G. P. Putnam's Sons. 1876.

The Use and Value of Arsenic in the Treatment of Disease of the Skin. By L. Duncan Bulkley, M. D. New York: D. Appleton & Co. 1876.

A Century of American Medicine, 1776–1876. By Edward H. Clarke, M. D., Henry J Bigelow, M. D., Samuel D. Gross, M. D., T. Gaillard Thomas, M. D., J. S. Billings, M. D Philadelphia: Henry C. Lea. 1876. (For sale by A. Williams & Co.)

Transactions of the Texas State Medical Association. Eighth Annual Session. 1876.

Poems. By Mrs. Marcia Jane Eaton. Baltimore.

MARRIED. — In this city, October 18th, by Rev. Mr. Twombly, of Charlestown, Dr. John A. Lamson, of Boston, to Miss Mary E., daughter of the late Joseph B. Whitcher, of Milton.

CORONERS APPOINTED. — Horace E. Marion, M. D., of Brighton District.

THE BOSTON
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THE MEDICAL LIBRARIES OF BOSTON.[1]

BY JAMES R. CHADWICK, M. D.,
Librarian of the Boston Medical Library.

BEFORE entering upon the true domain of this report I propose to pass in brief review the other collections of medical books that have existed in this city, or are held now by various institutions, for the purpose of allowing a few comparisons to be drawn between them and our own library at the end of its first year of existence.

An attempt to trace these libraries to their sources has, in many instances, proved as fruitless a task as did the early expeditions to discover the head-waters of the Nile. Either the records are "lost, strayed, or stolen," or else there never were annual meetings, secretaries', treasurers', and librarians' reports, or other such laborious and often useless methods of recording progress.

It is gratifying at the outset to learn that our association has adopted the name of almost the first extensive collection of medical books that was made in the city. It would be doubly pleasing could we spread a paternal wing over the books themselves.

The Second Social or Boston Medical Library. In the year of our Lord 1805 Drs. John C. Warren and James Jackson formed a private medical society for mutual improvement, in conjunction with Drs. Dixwell, Coffin, Bullard, Shattuck, and Homans. The society came together once a week for the purpose of reading and listening to papers. The members continued to meet until death removed all in succession. From this society, and principally from the exertions of Drs. Warren and Jackson, sprang the Boston Medical Library.[2]

I have been unable to obtain any information about the library except what little is contained in the catalogue of its books published in 1823, and the vote whereby it was united with the Athenæum, three years later. From the former I learn that the annual assessment was ten dollars, a large sum for those days, and one which testifies to the high value set by our forefathers upon the advantage of having free access to medical literature.

[1] A Report read at the First Annual Meeting of the Boston Medical Library Association, October 3, 1876.

[2] Life of John Collins Warren, M. D. By Edward Warren. Vol. i., page 77.

In 1826 the Boston Medical Library ceded its whole collection of books, which in 1823 numbered 1311 volumes and was valued at the time of transfer at $4500, to the Athenæum on the following terms:—

It was agreed: "That each proprietor of the medical library should have the privilege of a life-subscriber on the payment of five dollars per annum, and should become a proprietor of the Athenæum by paying one hundred and fifty dollars, such life-subscriber to have the right, on his removal from Boston, to transfer his share for and during the period of his life; that the members of the medical library should have access to the privileges of the Athenæum during the then coming year for the sum of ten dollars; and that the medical department should receive its full proportion of the sums applied hereafter to the purchase of books."

As the shares of the Athenæum were then valued at three hundred dollars, it is probable that nearly all the members of the medical library availed themselves of the opportunity of purchasing at half-price. I find that thirty shares were so taken.

In the letter of Dr. Shattuck dated 1828, which was recently published in the proceedings of the Suffolk District Medical Society,[1] we are informed that there were at that time but seventy-one "regularly-bred" physicians in the city of Boston, so that at least one half of the whole number must have been members of the library. There were only thirty-five physicians who, in his opinion, could support themselves by their practice.

The Athenæum, enriched by the above collection, has added to its medical department until it numbers to-day about five thousand volumes. The average annual accessions for the last few years amount to forty volumes, including bound journals. It subscribes to seven American journals, two English, and one French, and to the reports of five London hospitals. Its sets of journals are not numerous, and are notably incomplete.

The Treadwell Library at the Massachusetts General Hospital was founded through the munificence of Dr. J. G. Treadwell, of Salem, in bequeathing, at his death in 1857, to the hospital his own medical library and the sum of forty thousand dollars, of which five thousand dollars were set aside as a permanent fund, the interest of which should be devoted to the purchase of books.[2] This library numbered 3527 volumes on January 1, 1876, and is increasing at the annual rate of about fifty volumes, including the journals, when bound, of which it receives thirty-two regularly. A written catalogue was made in 1860, and has been kept up to date. The library contains full sets of the best English

[1] Boston Medical and Surgical Journal, September 7, 1876.

[2] This library was first offered to the President and Fellows of Harvard College, who declined to accept the bequest on account of the "unusual and embarrassing conditions" they were I have been unable to discover.

and American journals, but is especially rich in works relating to surgery. The use of the books is restricted to the immediate staff of the hospital, but is accorded to other professional men on written application being made.

The Harvard University Library, in Gore Hall, Cambridge, now contains 3783 medical books. This department of the library was founded by Ward Nicholas Boylston, Esq., who, in the year 1800, gave to the college a medical library of eleven hundred volumes as a special tribute of respect to his uncle, Dr. Zabdiel Boylston. In 1803 he established a permanent fund of five hundred dollars, subsequently augmented, the interest of which was to be expended in the purchase of books and the publication of prize dissertations.

About eight hundred volumes were added to this collection a few years since by Dr. B. J. Jeffries from the library of the late Dr. John Jeffries.

The library contains but few modern works, and hardly any recent periodicals. It receives but one strictly medical journal, and that gratuitously.

The Library of the Harvard Medical School consists almost exclusively of old text-books and sets of journals; it is used chiefly by the students of the school, for whom it was avowedly designed by its founders. It originated in a donation of books drawn from the private libraries of the medical faculty in 1819. The number of books may be estimated at about eighteen hundred, of which many are duplicates.

Within a week the physiological laboratory of the medical school has been the recipient of a very large cabinet of microscopic specimens and three hundred and fifty volumes from Dr. John Dean, of this city. The library contains full sets of all the best German, French, and English periodicals relating to anatomy, physiology, and microscopy.

The Boston City Library has in its medical department, according to the annual report for 1876, 9535 volumes. The average annual increase for the past ten years has been 549 volumes.

It receives regularly twenty-four American journals, nineteen English, fourteen French, ten German, and about twenty transactions of societies, making a total of eighty-seven periodicals.

Its collection of journals is very valuable, and the sets are tolerably complete. The trustees are very liberal in purchasing any books desired by the patrons of the institution. The regulations necessitated in a large general library do not allow of access to the shelves except as a special favor. Since the foundation of this library in 1852 many private collections of books have been deposited in its medical alcoves, among others a large portion of the library of the late Dr. James Jackson, and quite recently the library of Dr. D. T. Coit, when he retired from practice. The library of the Massachusetts Medical Society was

likewise given to the city a few years ago, at a time when all hope that the profession would ever have a library of its own was entirely relinquished.

This is unquestionably both the largest and the most valuable medical library in the city.

The Boston Society of Natural History has a very choice library of twelve thousand volumes, and receives regularly over five hundred journals, reports, society transactions, etc. Among them are series of all the best journals relating to anatomy, physiology, microscopy, chemistry, botany, and other kindred branches of medical science. Free use of the books is accorded to all who apply for the privilege.

The Boston Medical Library Association. It will be manifestly impossible for me to give in detail the individual sources from which the present library has been drawn, or the special character and size of the varied contributions. I shall, however, in this first report, seek to indicate the principal collections of books that the library has received, and make brief acknowledgment to its most prominent benefactors.

The importance of having a reading-room provided with current medical journals and of forming the nucleus of a future medical library of reference, in a locality easy of access from all parts of the city, has long been felt by the profession of Boston. The movement which culminated one year ago in the formation of the present association emanated from the Society for Medical Observation.

The first meeting of six gentlemen at the house of Dr. H. I. Bowditch on December 21, 1874, for the purpose of discussing schemes for a library, was succeeded by others, with a steadily increasing number of participants, during the spring of 1875, and later by a general call to the profession to meet on August 20, 1875. On this occasion organization was effected and officers for the first year were elected.

After a long search the rooms at No. 5 Hamilton Place were secured as possessing the prime requisites of central position and freedom from the noise of passing traffic and of business within doors.

The first extensive collection of books received was that of the Society for Medical Observation, amounting to 911 volumes of the most valuable American, English, French, and German journals. This still constitutes the most useful portion of our library. By the terms of the contract the Observation Society retains full ownership in its library and book-cases, and the right to take from the rooms its own books for the period of one week. It binds its own journals and insures its own library, as heretofore.

The next considerable acquisition of books was the obstetrical library of Dr. William Read, numbering nearly two hundred volumes, and containing nearly all the standard publications on midwifery that have appeared in England during the past century, including many rare and

choice works. This department of our library has since been enriched from many other sources, so that it now numbers nearly four hundred titles.

In January, 1876, we received from the trustees of the Boston Dispensary the library left in their building by the late Dr. John Alley. Among other books a large number of the publications of the Sydenham Society were thus added to our resources.

On April 17, 1876, the Boston Society for Medical Improvement deposited its library of 474 volumes in our rooms on the same terms as were accorded to the other society. By this act we acquired many sets of old English and American journals of great rarity and of practical as well as historic worth.

The list of individual contributors is too long to be cited here, yet I cannot pass on without acknowledging the receipt of many volumes bearing the autographs of men whom, I trust, we shall never cease to revere as the leaders of medical thought in New England during the first half of this century: John C. Hayden, George B. Doane, William Ingalls, John Homans, Winslow Lewis, James Jackson, John C. Warren, John Ware, and Charles Gordon. I regard the gifts of these volumes as special testimonials of confidence and encouragement to our infantile institution on the part of the descendants of these worthies.

To David Clapp and Son we are indebted for 271 bound volumes of American and foreign journals, ceded to us for a nominal sum, they being the exchanges of the Boston Medical and Surgical Journal during a portion of the half-century of its publication by that firm.

From these and other contributors, and by exchanges with libraries and individuals in all parts of the country, have been gathered the books that now fill our shelves.

More important, however, than sources of supply and methods of procuring are the results; and I will now render account of the trust that you have reposed in me in a precise statement of the present condition of your collection. The library contains

1339	volumes of	American journals.
739	"	" English "
300	"	" French "
222	"	" German "
23	"	" Canadian "
10	"	" Danish, Norwegian, and Russian journals.
6	"	" Italian and Portuguese journals.

Making a total of

2639	volumes of	journals.
404	"	in the obstetrical section.
1445	"	in general library.
4488	"	in whole library.

I take pleasure in announcing that negotiations are now pending with

the Statistical Society which, it is hoped, may result in the deposit of its library of vital statistics in our care. It contains about six hundred volumes of official reports, journals, documents, etc., bearing upon sanitary and vital science, which would prove of great value to all of us who are engaged in researches of this nature.

Of pamphlets we have about three thousand.

To turn now to another distinct purpose of the association, that of providing a reading-room, well stocked with current medical literature, I am able to report that we are regularly in receipt of one hundred and twenty medical journals, for twenty-three of which we subscribe, and for the remainder are indebted to the editors and publishers of the Boston Medical and Surgical Journal, who now send us all their exchanges within about one week of the time of their receipt; to the Harvard Medical School, and to Messrs. Codman and Shurtleff, who make over to us all the journals which they respectively receive in consequence of advertisements; and to several individual members of the association who deposit temporarily journals for which they subscribe. From the editors of the *North American Review* we receive all the medical and scientific books which are sent to them.

It is hoped that our resources may in the coming year allow us to enlarge the list of journals by the addition of some foreign ones that rarely come to this country.

From the treasurer's report you have learned that one hundred and thirty-three members have paid the annual assessment of ten dollars. From the sum thus acquired we have been able to pay our current expenses and one half the cost of furnishing. The residue of indebtedness has been defrayed by the voluntary contributions of many friends, so that we have the gratification of entering upon our second year with a library of four thousand five hundred volumes and three thousand pamphlets, *free from debt.* With a view of extending the facilities of the library and reading-room to the greatest possible number of subscribers, the executive committee have presented the amendment to the by-laws, that you have just voted, reducing the annual fee to six dollars.

A card catalogue with cross references was commenced early in the summer, and is now approaching completion, owing to the indefatigable labors of Drs. E. Wigglesworth, F. H. Brown, E. M. Buckingham, and others.

I cannot close this report without testifying to the prudence of the nominating committee, to the active coöperation of the executive committee, and especially to the deep interest and untiring exertions of your assistant librarian.

Let us enter upon the new year with a firm determination to fulfill the kindly prediction contained in the following paragraph quoted from

the highest authority in such matters: "The medical library of most promise in Boston is that of the Medical Library Association, which, though only one year old, has about three thousand volumes, and will probably rapidly increase."[1] Our library already exceeds the figures here adduced by fifteen hundred volumes.

GANGRENE AND SLOUGHING OF THE SCROTUM AND PERINÆUM; RECOVERY WITHOUT LOSS OF TESTICLES.

BY WILLIAM A. BYRD, M. D., QUINCY, ILLINOIS.

MOST surgical text-books inform us of the frequency of sloughing of the scrotum, yet it is a lesion rarely seen by general practitioners.

Drs. I. F. Galloupe and T. T. Graves, of Lynn, report a very interesting case of the kind following an injury by machinery, in the JOURNAL for June 29, 1876; and Dr. J. G. Hendrick, a case equally interesting as a complication of anasarca, in the *American Medical Weekly* for July 15, 1876.

September 7, 1875, I was requested by my friends, Drs. William and Charles A. W. Zimmermann, to visit with them J. K., a German baker of middle age, well proportioned and of previous good health. He had been taken a few days before with rigors, pain and swelling in the perinæum, and general nervous prostration, with retention of urine, for which the Drs. Zimmermann were called. Upon examining the perinæum they discovered a small dark spot in the integument, half-way between the anus and the scrotum, that was evidently gangrenous. The physicians passed a Nélaton's catheter, applied warm poultices to the perinæum, and gave tonics. The discoloration continued to increase until it involved the whole perinæum and scrotum, extending to both ischial tuberosities laterally, and from the anterior verge of the anus posteriorly, to the junction of the scrotum and penis anteriorly. The discolored parts felt baggy, evidently containing infiltrated fluid; to allow as much as possible of this fluid to escape, Dr. Charles A. W. Zimmermann made an incision about an inch in depth, extending from the anterior to the posterior edge of the gangrenous parts, following the raphé of the scrotum and perinæum. There was now colliquative diarrhœa and sweating, with delirium.

The patient was in the condition described above when I first saw him. We decided to cut away as much of the gangrenous mass as possible without invading healthy tissue, and, as an absorbent and disinfectant, to apply within and around the cavity thus made as much well dried and finely pulverized clay as we could. In the afternoon the clay was removed, being saturated with the fluids from the surrounding gangrenous tissues, shreds of which came away attached to lumps of

[1] Literature and Institutions, by Dr. J. S. Billings, in The American Journal of the Medical Sciences for October, 1876.

the clay. The wound was well washed with a five per cent. solution of carbolic acid, was wiped dry, dry salicylic acid was lightly dusted over it, and it was refilled with dry clay. The strength was kept up with beef-tea, egg-nog, and decoction of bark; the sweating, restlessness, and diarrhœa were controlled with opium and atropia. Every six hours a Nélaton's catheter was passed and the urine drawn off.

September 8th. Less depression, sweating, and diarrhœa. A well-defined line of demarkation extended around the entire gangrenous mass, which was three inches in diameter between the ischia and six inches in diameter antero-posteriorly. Much more tissue came away with the clay, and some healthy pus was discharged. The same treatment was continued.

September 9th. The greater portion of the gangrenous tissues had become detached, leaving the anterior portion of the rectum exposed for about two inches. The bulbous portion of the urethra and also the membranous portion of the same were exposed as far back as the junction with the prostate gland. The membranous portion was entirely detached inferiorly and laterally, as was perfectly demonstrated every time a catheter was passed. The testicles with their tunicæ vaginales hung uncovered and unattached, except by their cords, which were exposed until they reached the integument opposite the root of the penis.

This was the last time I saw the patient until after his recovery, which was very rapid, and which he owes to the careful and skillful attention of the Drs. Zimmermann, who informed me that the same general course of treatment was pursued. Not being able to get suitable clay to apply to the fragmentary gangrenous patches that were still undetached on the 10th, they substituted pulverized Peruvian bark. As soon as all the sloughs had come away, the granulations were dressed with a five per cent. solution of carbolic acid.

As regards the cause of the gangrene we could learn nothing. The patient had received no bruise of the perinæum that he remembered, had never had any venereal trouble or stricture of the urethra, and the most careful search showed no opening in the urethra through which the urine could have been extravasated. The retention of urine was subsequent to the appearance of pain and swelling in the perinæum, and was the symptom that caused him to send for a physician.

Some weeks after he was up and about I examined him and found the perinæum replaced by soft, elastic cicatricial tissue. The skin had grown out and formed a very neat but small scrotum, in which the testicles appeared freely movable. He claimed that his venereal appetite was not impaired in the least, and that he had as complete control of his rectum as ever.

I see the man every few days, and he has apparently been in excellent health ever since his recovery, more than a year ago.

NESTLÉ'S FOOD FOR BABIES.

BY C. P. PUTNAM, M. D.

DURING last summer the attention of a number of physicians in this neighborhood was called to a food for babies, little known here, Nestlé's Lacteous Farina, made in Vevey, Switzerland, the use of which has some decided advantages, in spite of its not being the perfect substitute for mother's milk which every patent food claims to be.

Mr. Astié, the agent for the food in New York, brought with him to Boston recommendations from various sources, and some experiments with it have been published in foreign journals, to one of which I shall refer later. More or less of the food had been sold in Boston in preceding years, but until this summer apparently little or none since it has been packed for transportation in tin boxes, which alone are said to be sure to protect it from spoiling during the voyage from Europe.

In one respect the food has a practical superiority over all the numerous foods that are in common use here, namely, it comes in a dry form, and yet only water, no milk, is required in preparing it for use. It is well known that bottle-feeding is made difficult, almost more than in any other way, by the changes that milk undergoes either at the hands of the milkman, or under atmospheric influences, or from want of care between the time when it leaves the cow and the time when the last of the evening's or morning's supply is given to the baby.

Although water only is used in cooking the food, it consists almost entirely of milk in the form of powder, mixed, as is claimed, with bread baked for the purpose, of the best flour, of which only the most nutritious part, the crust, is used. The milk is brought fresh from large dairies belonging to the manufactory at Vevey, and, having been tested, is poured into steam-heated vessels and condensed in a vacuum at a nearly uniform temperature, not above 120° F. The powder of milk and bread crust which results is very fine. Lebert says that he found grains $\frac{1}{1250}$ of an inch in diameter, and that grains of starch were found only in fragments.

In preparing the food for use, one part is mixed with from six to ten parts of cold water, which is then boiled while stirring. This cooking may be intrusted with comparative safety to unskilled hands, — a very important matter, — for the food has no tendency to ball or cake, as farinaceous substances are apt to do, and it is not likely to burn. It is not even necessary to begin by making a smooth mixture with a portion of the water.

Ehrendorfer, assistant in Monti's poliklinik in Vienna, reports[1] that this food was given to twenty insufficiently nourished and forty sick children from five to twenty months old. Of these, fifty-one continued

[1] Jahrbuch für Kinderheilkunde und physische Erziehung, 1874.

to take it until they were well, while with nine it was discontinued either because they did not like it or because they did not improve. Medicine was also given in these fifty-one cases, but the good results were attributed largely to the food.

Ehrendorfer concludes that the food is especially valuable in making up for a deficient supply of mother's milk, and that it is also often serviceable in cases of diarrhœal diseases (the less so the younger the child), especially in diarrhœa consequent on weaning, when the most striking results appear to have been attained.

He compares this food, though in an indefinite way, with fresh country milk, with Liebig's food, and with condensed milk, and expresses the opinion that no one of them possesses decided advantages over the others. It would seem, however, that, whatever might be the result of more extended experiments, he had hardly done justice to his own experiments as they stand, for one could not expect to give any substitute whatever for mother's milk to sixty babies taken as they come, and find it succeed with as many as fifty-one of them.

Monti has given the food to very young children in private practice, and is of the opinion that it is not appropriate for children under six weeks of age. We do not hear, however, that it did not suit any children under that age with whom it was tried, and the statement as it stands is of so universal application to all artificial foods that it does not seem certain that it shows a peculiar property in this one.

I have given the food to a good many children with essentially the same result as that reported by Ehrendorfer. Generally it was well liked and well borne; occasionally it was not retained by the stomach, or was not liked by the baby. My impression is that it is not likely to be successful as often as Liebig's food, when the latter is made entirely in the kitchen every day and not from an extract, but the difficulty of making it in this way counts sadly against it. It is hardly necessary to say that Nestlé's food is not going to prove a perfect substitute for mother's milk; few of us expect that of any artificial food.

It is, however, fair to recognize that it is supplied in compact form, is easily cooked, is comparatively safe from the accidents from which milk often suffers, especially in the city; that most babies like it, and that it generally does not disturb the digestion and is nutritious.

RECENT PROGRESS IN OPHTHALMOLOGY.[1]

BY O. F. WADSWORTH, M. D.

Origin and Anatomy of Pterygium. — Homer[2] considers pterygium ction of advanced life, allied to pinguecula. Like the latter,

[1] d from page 527.

[2] f. schweiz. Aerzte, September 15, 1875; Revue des Sciences méd., April, 1876.

true pterygium is limited to the region of the palpebral fissure. The disease begins by a very small ulceration at the edge of the cornea, beneath the head of the pinguecula, and there is thus produced a minute cavity into which dust easily enters and in which tears and conjunctival secretion collect. When the ulceration heals, the conjunctiva is dragged and forms a slight elevation, and repetition of the process ends by causing an encroachment of the conjunctiva on the cornea. This method of formation renders the apparent width of the attachment to the cornea greater than it is in reality, the dragged conjunctiva assuming a fan-shape. That the true surface of adherence to the cornea is much less than the size of the pterygium is shown by its being always possible to pass a probe for a certain distance beneath its edges, but still better evidence is afforded by the results of microscopical examination. On vertical sections it is seen that the posterior surface of the pterygium has, except over a very narrow extent, a continuous epithelial covering. The pushing back of the caruncle, constantly present with pterygium, is also proof that it is not a new formation. The prophylactic treatment consists in removing causes which give rise to pinguecula — exposure to wind, dust, etc. It is not necessary to remove the whole of the pterygium, but only to reduce it, and in this way cicatricial contraction is avoided.

Complications of Iritis. — Of the two propositions laid down by Graefe, that the existence of posterior synechiæ is the chief cause of recurrent iritis, and that closure of the pupil is the starting-point of new complications and especially of chronic choroiditis, the latter has been unanimously accepted as true, but the truth of the former has lately been disputed. Schnabel,[1] from observation of a large number of cases, concludes that it is utterly impossible to give to posterior synechiæ an important position in the ætiology of acute iritis. Of one hundred and eighty cases of acute iritis, in only nine, in six individuals, had there been iritis before. Three of these individuals had recurrence without previous synechiæ, in another the previous existence of synechiæ was uncertain, and in still another marked symptoms of syphilis were present at the time of the relapse. Under the head of chronic iritis Schnabel places such cases as began with acute iritis, but in which there was no complete freedom from inflammation afterward; those in which synechiæ remained, but the subsidence of acute symptoms was followed by a constant diminution of vision and intra-ocular changes seen with the ophthalmoscope, without changes in the iris; those in which the course was for a time like that of the latter class, but was interrupted by a fresh attack of iritis, which ceased after the formation of new synechiæ and disorganization of the iris, or which became chronic as in the first group. Supposing that the progressive changes were not due to

[1] Archives of Ophthalmology and Otology, v. 2.

the synechiæ, but to chororiditis coming on at the same time as the iritis and dependent upon the same cause, the author examined a number of cases of acute iritis with the ophthalmoscope, and found almost constantly the existence of diffuse retinitis, comparatively seldom changes in the vitreous, and rarely anomalies in the choroid. Neither the severity nor the nature of the iritis appeared to exercise any particular influence in determining the retinal complication. This presented both in syphilitic and in non-syphilitic persons the appearance of so-called specific retinitis, except in three cases, and those three cases were all specific. The changes in the choroid (consisting in more or less atrophy of pigment in the epithelial layer) in these cases did not accompany opacity of the vitreous in several instances, and the latter is regarded as due to hyalitis. The course of events is as follows: "Acute iritis is frequently accompanied by retinitis or hyalitis, or by both at the same time. After the termination of the iritis the more tenacious intra-ocular complications persist. In the majority of cases they get well too. In some, however, they slowly progress quite independently of the condition of the iris, and deteriorate the vision for months and years after the primary iritis has disappeared. According as retinitis or hyalitis persists, the final issue is atrophy of the retina and optic nerve, or atrophy of the vitreous and detachment of the retina." As a consequence of this view the practitioner should examine the interior of the eye in every case of acute iritis, and not consider the disease at an end simply because the appearances of inflammation in the iris and the exterior of the eye have disappeared.

Formation of Capsular Cataract. — Sinclair,[1] by experiments on animals, found that solutions of salts readily passed through the lens capsule by diffusion, but filtration of fluids through the capsule occurred only under a pressure greater than is normally present in the eye, while formed particles did not penetrate it at all. The injection of blood, pus, or dilute solution of ammonia into the anterior chamber set up chemical and inflammatory changes in the fluid surrounding the lens, and a disturbance of nutrition was thus caused, which became manifest in the superficial layers of the polar region of the lens. Examination of the parts thus altered showed that the lens substance and intra-capsular cells swell, become opaque, and disintegrate to an amorphous, gelatinous, and later to a granular substance. This degenerative stage is followed after a variable time by cell proliferation. The whole process of formation of capsular cataract is therefore to be looked upon as an inflammatory one, but one in which the lens capsule plays only a passive part and any projections or folds to be seen in it are dependent on the changes of the intra-capsular cells and fibres.

Treatment of Glaucoma by Physostigmine. — It has been remarked

[1] Inaug. Diss., Zürich, 1876.

by several writers that in an eye predisposed to glaucoma the instillations of atropine may excite an acute attack, and this led Lagneur[1] to attempt to determine if physostigmine might not exert an antagonistic effect to that of atropine in respect to increased intra-ocular pressure. He used a watery solution of a third to a half per cent., and this was well borne, when three or four drops were placed in the conjunctival sack at intervals of twenty minutes daily. Employed in five cases of glaucoma simplex and one of secondary glaucoma (the consequence of a partial dislocation of the lens), the application was constantly accompanied after three or four days by an evident decrease of intra-ocular pressure, the decrease becoming greater till the eighth or tenth day. When vision was not already destroyed it also showed a notable improvement. It was at the time of writing uncertain if the effect were permanent, but the diminution of pressure at least lasted much longer than the effect on the pupil and the accommodation. The use of physostigmine in normal human and in rabbits' eyes produced no change of tension, nor did it have any effect in a case of hæmorrhagic glaucoma. Experiments having shown that this drug directly stimulates many smooth muscular fibres, it seems probable that its action in the eye is to stimulate the non-striated fibres of the choroidal vessels. Its methodical employment for weeks is worthy of trial in glaucoma simplex, especially if the iris and anterior chamber manifest no abnormality, since in such cases experience has shown that iridectomy is of no value; in cases where iridectomy has not reduced the tension; and in secondary glaucoma, when the iris is not partially fixed by anterior or posterior synechiæ.

Synchisis Scintillans. — In the vitreous of both eyes of a man, aged forty-two, who died of purulent infection following an operation on the scrotum, Poucet[2] discovered plates of cholesterine, needles of tyrosine, and globular masses of phosphates. During life and before the operation, but for a small patch of choroidal atrophy in one eye, the only anomaly to be seen in the eyes was the presence of minute, sparkling, movable bodies in the vitreous. The existence of cholesterine (in such cases) has long been recognized, but the latter two substances have not hitherto been found. In the present case the cholesterine crystals were comparatively few. The slender needles of tyrosine were clustered together in small masses, or attached to cholesterine plates or phosphatic concretions. The globular masses of phosphates were numerous, some of comparatively large size, and, studded with little elevations, they bore some resemblance to a chestnut bur. They often inclosed groups of degenerated cells. There were also cells impregnated with phosphatic granules, and others formed groups in stages of proliferation.

[1] Centralblatt, No. 24, 1871.

[2] Annales d'Oculistique, Mai et Juin, 1876.

Aside from the conditions described, the main lesion to be found, and that not a very marked one, was in the region of the ciliary processes. Here there was maceration of the pigmented epithelium, and an increase of the cellular elements of the vitreous. Poucet concludes that the cause of the deposition of phosphates around the cells, and of the crystallization of tyrosine and cholesterine, was a fatty degeneration in the vitreous, analogous to that in atheroma of the arteries.

Spinal Myosis. — In certain cases of myosis occurring with tabes dorsalis, Argyll Robertson first described the peculiarity that there is no reaction of the pupil to light, but distinct variation of its size accompanying accommodative changes. Hempel [1] has collected nineteen cases, part observed by himself, part by others, in which this peculiarity was noted, and from their analysis he concludes that the essence of the phenomenon consists in an affection of the fibres connecting the opticus and oculo-motorius, which interrupts reflex action. With this interrupted connection there may exist also paralysis of the dilator, of the iris (myosis), paralysis of the sphincter (mydriasis), paralysis of both or neither of these muscles (medium size of pupil). With co-existence of paralysis of the sphincter alone, or of both sphincter and dilator, the condition could not be distinguished from that of simple paralysis of the sphincter, since reaction of the pupil neither to light nor to accommodative effort would occur, and with paralysis of neither muscle, so long as this was the condition in both eyes, attention would hardly be called to the peculiarity. It is generally the myosis which would attract attention. That the disturbance is not at the nucleus or in the course of the oculo-motorius is evident from the retained reaction to accommodation, and the preservation of vision demonstrates the same for the opticus.

In fifteen cases the myosis was of both eyes; among these were two in which the reaction to light was retained but sluggish; in three, one pupil was sluggish, the other without reaction to light; in all the others there was no reaction to light. In one case there was myosis of one eye, mydriasis of the other. In all, the change of the pupil with accommodation was normal. In three cases there was no myosis, but in other respects the behavior of the pupils was the same. It is worthy of remark that in one case in which there was marked myosis and no reaction to light with retained reaction to accommodation, there were no signs of tabes, the fundus was of normal appearance, but the vision was somewhat impaired, and the age of the patient (thirty-eight) was not such as to account for the myosis. It is possible that this was one of those cases in which the ocular affection precedes the other symptoms of tabes.

Disease of the Eye in Diabetes. — But little is generally to be found in text-books on ophthalmology on the affections of the eye and its

[1] Graefe's Archiv, xxii. 1.

adnexa accompanying diabetes. Leber[1] has studied the subject by the light of recorded cases and of his own observations. It appears from an inspection of the literature that disturbances of vision with diabetes are by no means infrequent. Aside from the generally recognized diabetic cataract, paresis of accommodation seems to be much the most common cause of such disturbance, but there is a not inconsiderable number of cases in which there is disease of the retina or opticus.

An analysis of nineteen cases with implication of the retina shows that retinal affections are much more commonly found in advanced and severe cases, where interference with nutrition has already reached a considerable degree. Whether the retinitis may not be due to a secondary nephritis can hardly be decided in all cases; in some the evidence points strongly in this direction, while in others the influence of a nephritis must be positively excluded. The form of retinal affection found with diabetes presents little that is characteristic. Frequently there were found simple retinal hæmorrhages, often complicated with hæmorrhage into the vitreous; some cases offered the picture of apoplectic retinitis, such as is observed specially with disease of the heart or vessels; in others there was retinitis with hæmorrhages and white patches not to be distinguished from those seen with Bright's disease. Nor did the latter form present itself particularly in cases of attendant kidney disease, but also in cases of pure diabetes.

The affections of the opticus observed in diabetes are either atrophy of the nerve or amblyopia without change discoverable by the ophthalmoscope, with or without narrowing of the field of vision or with hemiopia. The nerve affection may be due to a seconday nephritis, as is the case with retinal affections, but also to a complication with intra-cranial disease, while the latter may be either secondary to the diabetes or the exciting cause both of it and of the trouble in the nerve. The great majority of disturbances in the opticus with diabetes appear, however, free from important cerebral complication, and to depend directly upon an idiopathic diabetes. Leber's own cases prove that diabetic affection of the opticus may occur with complete absence of symptoms pointing to diabetes even without any consciousness of disturbed health except as to loss of vision, and that a like affection of the retina may occur without at least the typical symptoms of glycosuria being present. The lesson to be drawn from these facts is that in no case of amblyopia should examination of the urine for albumen and sugar be neglected.

The common occurrence of paresis of accommodation has been mentioned, and often appears among the earlier symptoms of beginning diabetes. Mydriasis and paralysis of various external muscles have been observed also, and this as well when the diabetes has been the primary malady as when it has been secondary to an intra-cranial disease. In diabetic cataract it must be admitted that sugar has occasionally been found.

[1] Graefe's Archiv, xxi. 3.

FREY'S COMPENDIUM OF HISTOLOGY.[1]

"HISTOLOGY has, in the course of a few decades, triumphantly won its field; it has become an integral part of medical studies. The hand-books have necessarily become constantly more voluminous in consequence of the immense wealth of materials.

"A short compend of the most essential facts is desirable for students and practicing physicians. I have often heard this wish expressed.

"May the attempt which I herewith venture be, therefore, indulgently received. The defects of this little book are very well known to the author."

This modest preface, signed by the author and dated July, 1875, gives a perfectly just idea of the scope and nature of the work. We are not favorably inclined to compendiums, but we must except this one from our general judgment. It certainly will hardly satisfy the advanced or the very enthusiastic student, but for most it is an excellent text-book. The twenty-four lectures cover the ground very well, and may serve as a very good skeleton for the instructor in laying out a course. It is needless to say that the work is well up to the times, and we believe that Dr. Foulis's investigations on the development of the ovary are the only important addition to histological knowledge since its publication. The translator would have done well to have mentioned them in a note. The style is so easy and attractive that the book loses much of the dryness which is thought inseparable from the subject. The translator has done his work very well, though he seems occasionally unable to free himself from the idioms. The student who is not familiar with German will, we fear, misinterpret such expressions as "this actually burning controversy." The cuts, with one or two exceptions, are the same as those in the author's larger work on histology and histo-chemistry. We think it to be regretted that the magnifying power or the numbers of the objectives (presumably Hartnack's) should not be given under each figure, for the beginner cannot see that very different powers are employed. We think also that it would have been well to have said a word here and there on the best method of preparing and staining certain tissues and organs, but owing to the well-deserved popularity of Rutherford's Outlines of Practical Histology this is of less importance. In short, our criticisms refer to matters of detail only, and our praise to the work as a whole.

T. D.

URINARY DISEASES.[2]

THIS volume, which is an American reprint of an English book, seems quite superfluous, inasmuch as it covers ground already fully and far more ably occupied by several other works, foremost among which we would place the

[1] *Twenty-Four Lectures.* By HEINRICH FREY. Translated by GEORGE R. CUTTER, M. D. 208 Engravings on Wood. New York: G. P. Putnam's Sons. 1876. (For sale by A. Williams & Co.)

[2] *Diseases of the Bladder, Prostate Gland, and Urethra, including a Practical View of ... s, Deposits, and Calculi.* Being the fourth edition of The Irritable Bladder, ... ch enlarged. By F. J. GANT, F. R. C. S. Philadelphia: Lindsay and ... 6.

treatise of Van Buren and Keyes. Mr. Gant's book is quite devoid of any originality save in the style in which it is written; this, however, is exceedingly bad. The work treats of an immense variety of subjects compressed into a small space, and may thus recommend itself to certain readers or rather buyers.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

SEPTEMBER 30, 1876. *Antiseptic Gauze Dressing.* — DR. E. H. BRADFORD showed dressings of antiseptic gauze which had been used in a case of excision of the breast. The patient, a woman of cachectic appearance, sixty-four years of age, submitted to the operation September 8th. Seven days afterwards the patient walked about the ward; ten days after the operation she left the hospital, and she has had no further trouble from the incision, which healed without any suppuration. The operation was done under carbolized spray, and carbolized catgut sutures and ligatures were used. The wound was dressed but four times, and yet remained perfectly neat. The dressings shown gave evidence of the absence of any discharge, except a slight, bloody oozing. The cut edges had at no time the inflammatory swelling almost always seen in the process of healing. Dr. Bradford thought that it was impossible to state that the result was not due to other causes than the antiseptic dressing, still that it was but just to report a successful result, as a failure would have been regarded as casting discredit on the method. It was interesting that the first dressing, which was quite moist with blood when removed from the wound, showed a week afterwards a coating of mold. The carbolized gauze was therefore unable to stop the development of the spores after the blood had been well exposed to the air, when the dressing was removed, an evidence of the necessity for the use of carbolized spray in changing the dressings.

Torsion. — DR. MINOT inquired what was the use of tying the arteries instead of twisting, remarking that several London surgeons reported that they had not tied an artery for years.

DR. BRADFORD said that opened the question of the merits of torsion versus ligature.

DR. FIFIELD stated that torsion would promise better in the case of large arteries than with the small arteries of the breast. In arteries of the size of the femoral, the carbolized ligature might cut through. Dr. Fifield said that of late he had tied few arteries, and that with regard to small arteries it was a question of fancy and of time, the only difficulty in the method by torsion being in pulling the artery out of its sheath with the finger-nails, until it can be seized with the torsion forceps and twisted. It was said that Mr. Byrant had twisted large arteries one hundred and eighty-four times without secondary hæmorrhage, and that if the artery were properly twisted secondary hæmorrhage could not occur.

Vaginal Ovariotomy. — DR. WING read a paper on vaginal ovariotomy which was published in the JOURNAL of November 2d.

In connection with Dr. Wing's statement that it was the opinion of some surgeons that the small intestine was never found in Douglas's cul-de-sac, Dr. Fifield said he supposed that the possibility of certain vaginal herniæ was accepted.

Dr. Chadwick thought that the small intestine might be found in Douglas's cul-de-sac, since frozen sections show that in different positions of the womb, anteversion, etc., the position of the intestines varies; also that the difficulty of positive diagnosis in cases of small ovarian tumors was another objection to vaginal ovariotomy.

Treatment of Tetanus. — Dr. Fifield remarked, with reference to reported cases of recovery from tetanus after the use of certain drugs, such as nicotine, chloral, and lately calabar bean, that opium seemed out of favor. It was called by physiologists a spinal irritant. Dr. Fifield had found that, in his experience, cases of tetanus recovered not on account of but in spite of the remedies. A case of recovery due to strychnine had lately been reported.

The following instance was mentioned. A man trod upon a rusty nail, and a fortnight after had sore throat with difficulty of swallowing. Two or three days later, when seen by Dr. Fifield, the patient had spasm of the diaphragm. Forty drops of laudanum were given every three or four hours, mercurial ointment was rubbed into the neck, and calomel was administered and followed by profuse catharsis, accompanied by blood. The patient could not swallow fluid extract of senna on account of spasm. Later, seventy drops of laudanum were given every four hours, plenty of milk, and a pint of brandy daily. There was opisthotonos, and the patient had to be removed from the bed quite stiff. He was able to urinate. The jaws were never entirely closed. An eruption of lichen occurred. The first symptom of recovery was a less degree of rigidity of the abdominal muscles, though diarrhœa continued in spite of the laudanum. Little by little the spasm diminished so that the patient could chew. With smaller doses of laudanum the diarrhœa subsided, and eventually the patient got well.

The cathartic action of laudanum was noticeable.

Subcutaneous Injection of Morphine. — In answer to the question why laudanum was used in preference to morphine subcutaneously, Dr. Fifield said that is was to avoid the liability to accusation by ignorant persons of having killed the patient.

Dr. Bundy inquired whether a fatal case had occurred from the injection of an eighth of a grain of morphine subcutaneously.

Dr. Fifield said that he had seen very nearly fatal results from an eighth to a quarter of a grain, notably in one case at the City Hospital, in which the battery had to be applied all night to keep the patient alive.

Dr. Minot asked whether an old solution was used, or powder dissolved on the spot, remarking that the strength of morphine solution was variable owing to evaporation and other causes. The powder was much more reliable. In answer to the objection that preparations of morphine were very insoluble. Dr. Minot said that a grain of the sulphate would dissolve easily in fifteen drops of water heated over a match. In the case of a patient seventy-eight years old, who was suffering from gall-stones, immediate relief followed the in-

jection of a third of a grain into the arm, and no bad symptoms followed. The symptoms mentioned as occurring after the injection of a vein had been observed. They were curious, but not alarming.

DR. FIFIELD said that the faintness and nausea which followed the subcutaneous injection of morphine were objectionable.

DR. MINOT thought that they were not more so than after any form of opium.

DR. LYMAN said that these effects were obviated by adding atropine in the proportion of a half grain to eight grains of morphine. He had once observed a patient who was in a dangerous condition for half a day after the injection of half a grain of morphine.

DR. WILLIAMS inquired whether the decomposition of the solution might not be the cause of bad symptoms from the development of bacteria.

DR. FIFIELD said that he had added a small quantity of carbolic acid to solutions of morphine as a preservative. He referred also to cases of active delirium following the use of morphine.

DR. WILLIAMS suggested that such cases might be due to perverted nutrition, as he had seen a little solution of atropine (two grains to the drachm) dropped into the eye cause violent delirium, which could not be due to the usual action of the drug, but to the feeble condition of the subjects.

DR. FIFIELD mentioned a case in which a quarter of a grain of morphine had been given subcutaneously in the case of a woman in labor. Death followed, and was attributed by the ignorant friends to the injection. At the autopsy rupture of a branch of the cœliac axis was found, with a quart of blood in the abdominal cavity.

DR. HALL thought that one-grain opium pills were safest for administration to the ignorant.

DR. HARLOW had found that many patients preferred morphine subcutaneously, and that an eighth to a quarter of a grain usually produced the desired effect.

DR. LYMAN had never found much effect from an eighth of a grain.

DR. GARRATT said that he had noticed that the injection of morphine in the epigastric region was usually free from the objections arising from too sudden absorption.

DR. D. HUNT had also observed that nausea and faintness were obviated by the addition of a sixtieth of a grain of atropine, and that carbolic acid was a preservative.

DR. LYMAN inquired whether typhoid fever was very prevalent, stating that he had met with an unusual amount.

SPIRITISM.

THE "spiritists" are having a hard time both at home and abroad. There is now an epidemic of exposure, apparently perfectly analogous to those of delusion, crime, and disease, which often affect both hemispheres at once. Truth just now is up and humbug is down, but the mediums need not be discouraged, for we venture to predict that their turn will come, and truth will go down

again. The fact is that a large number of weak minds desire to be deceived, and we may be sure that in one form or another the supply of deception will be equal to the demand. We are, nevertheless, in full sympathy with the present exposers. Spiritism is not only a silly but a wicked and dangerous fraud, that does great harm; consequently its exposure is desirable. A great difficulty in dealing with the matter is that it involves not only deception on the part of the medium but a preëxisting delusion, or tendency to delusion, on the part of the victim. The mold of a hand is placed before him; he often does not wait to be told that it belongs to some dear departed friend, but is only too glad to originate such a theory. His reasoning process must be something like this: "I am thinking of such a person; here is the mold of a hand; it is that of his or her hand." The self-delusion is so complete and spontaneous that the medium might be said hardly to take part in it. Now is it surprising that one who can deceive himself in the way we have supposed should decline to renounce this comforting fable because he is told the medium is a cheat? Not at all. Such minds are absolutely incapable of reason, and argument is thrown away. As an example, think of the subscription that is actually started to raise money to defray the costs of the appeal of the convicted impostor, Slade. There is something touching in the ingenious simplicity of the suggestion that Mr. Bishop, who exposes the mediums, does so by "medial" powers of his own. It certainly implies considerable greenness or great good nature on the part of the spirits.

Mr. Bishop's exhibition in this city on Saturday last was very satisfactory as a display of jugglery. His skill is certainly remarkable. In other respects we were greatly disappointed; for we had expected to have the tricks explained to the audience, but the promise to this effect was evaded. For instance, the trick of reading a name in a closed envelope was very well performed, but the only explanation vouchsafed by the exposer was that he found it out by "unconscious cerebration" on the part of Professor Horsford, who held the alphabet. To explain the trick the lecturer was bound to tell how this "unconscious cerebration" manifested itself, if indeed he did not already know the name. The committee was composed of Professors Holmes, Ellis, and Horsford, gentlemen of great scientific attainments; but it would have been much better to have had three who were experts in legerdemain. The explanation was far from a perfect one, such as, for instance, was given in London by the conjurer Maskelyne in open court during Slade's trial. We would suggest to Mr. Bishop that men of common sense do not need to be told that spiritism is a humbug, but that they would like a definite technical explanation of the way in which the tricks are performed. If he really wishes to do good, this is the way to do it.

MEDICAL NOTES.

raduating exercises of the Medical Department of Dartmouth Colace on November 1st. They would appear to have been of rather acter, as we notice that the Hippocratic oath was administered. ober rightly, a clause in this oath provides that the taker shall in-

struct without remuneration, by lectures, demonstrations, and otherwise, those wishing to learn medicine. We trust our new colleagues will remember this, unless they take this oath in a Pickwickian sense, like the temperance pledge, for instance. There were seventeen graduates, who were dismissed with a benediction.

—The sanitary condition of Philadelphia and the Exhibition grounds has been the subject of investigation on the part of a commission from *The Medical Record.* Its results are embodied in an editorial of that journal for October 28, 1876.

"So far as the sanitary condition of the grounds are concerned," says the article in question, "they may be regarded as fairly good. The numerous cases of affections attributable to irregularities in diet, etc., have usually yielded rapidly to treatment. Typhoid fever and allied febrile forms have unquestionably been much more prevalent than last year, but the comparative mortality from such causes has been largely surpassed even this year by at least one of the large cities which was visited as usual during the same season by immense numbers from all parts.

"To appreciate the task that lay before the engineers in devising effective drainage and sewerage for the exposition grounds, it will be best to consult the map. We shall there see that this three hundred acres of land is skirted on its eastern borders by the Schuylkill River, and that it is traversed from east to west by ravines which would naturally pour their waters into the river as it flows by. This very river water, however, is utilized for drinking and other purposes in the city of Philadelphia; for only a short distance below, at Fairmount, it is pumped up into a supply reservoir. Below this point again the river is dammed, and below the dam it receives much of the city sewage. It is unfortunate that only a small portion of the grounds slopes towards the south, or in the direction of the Schuylkill below the dam, so that it was thought impracticable by the engineers to carry all the sewage in that direction. Upon this southern slope, however, are the Main and Machinery buildings, so that a very large part of the waste really escapes to the southward, and emptying into the Elm Avenue sewer, on the southern line of the grounds, finds its way into the Schuylkill below the dam.

"On the rest of the grounds, from the Avenue of the Republic northward, the slope is mainly in an opposite direction, and here it is that the sewage is not carried into the city sewers, but is stored up temporarily in cesspools. This arrangement is thought to be perfectly safe, and the best practicable, because, while the soil itself is clay, the subsoil is gravel, and much of the liquid matter passes away through this natural filter. The residue is removed once or oftener daily, by odorless excavator companies, there being between seven hundred and eight hundred dollars paid to these companies per week for their work. They appear to do it well, removing the waste in closed carts. Owing to the excessive use of water for various purposes on the grounds, it was found impossible to provide for all waste in this manner, and a certain amount of the purely fluid matter has been allowed to pass into the two ravines, the Lansdowne and the Belmont, where it mingles with the surface stream. The former is the larger, and is artificial, carrying off the overflow from the principal lakes.

"We are not prepared to say that the arrangements for carrying off sewage and drainage are all that could be desired; indeed, it is clear that the supply water of the city is contaminated by the sewage of the grounds, but it is contended that the plan adopted was the only effective one that could be devised for the greater portion of the grounds; and, again, that this matter is so largely diluted with ordinary Schuylkill water that the taint is minimal. As for the sanitary condition of the grounds themselves, it is still to be proved that they have caused any unusual disease.

"In regard to the health of the city, there has been a marked increase in the number of typhoid cases, amounting, perhaps, in round numbers, to three or four times the usual number at this season. There has also been about an equal increase in the cases classed as typho-malarial. But while those classed as genuine typhoid have been fully as severe as usual, the typho-malarial cases have been quite mild in character.

"We are not in possession of sufficient facts to say that we can account for the increase of typhoid fever in Philadelphia, for we are not aware how prevalent the disease has been elsewhere; but we may safely say that there are certain conditions present in the city that are generally supposed to favor the production of typhoid, namely, an impure drinking water and imperfect sewerage."

In conclusion *The Record* remarks, —

"We have thus endeavored to present the facts of the case as bearing upon the existence and probable causes of fever in Philadelphia. While there is no doubt that the sewerage is very defective, that sewage is mixed to a certain extent with the drinking water, it is pretty evident that the dangers of fever have been very much exaggerated, and that there is very little more risk in visiting Philadelphia than would be encountered in other strange places. To those, however, who wish to take all ordinary precautions, under the circumstances we would simply say, Avoid drinking the water unless it has been boiled, eat warm and nutritious food at accustomed intervals, and guard against over-fatigue, whether of body or mind."

— An editorial in *The British Medical Journal* for October 7, 1876, on anæmia calls attention to the chief causes of the state and the consequently varying treatment. The chief causes are described to be imperfect assimilation, exhausting discharges, and the presence of some *materies morbi* in the blood, either introduced from without or formed within the organism itself. The less common causes are tuberculosis, cancer and allied affections, mental shock, and the form of necræmia with tissue degeneration known as pernicious anæmia.

In considering the treatment of the disease it is remarked that when anæmia is associated with strong mental shock, it is most intractable, and frequently resists the best laid schemes. Where anæmia coexists with an irritable stomach and acute indigestion, it is better to resort to bismuth, with acacia or tragacanth in a bitter infusion, before meals, than to give iron with the bitter. If iron be given in these cases before meals, it is apt to disagree or to be rejected, and the food with it. Consequently, it is well to give bismuth and to strictly regulate the dietary first; and then, when the stomach is irritable, iron may be added in the form of drops after food, by which

means it is often well digested in cases where, given otherwise, it would not be assimilated. It is not a matter of indifference which preparation of iron is used. Sometimes one form, or even several forms, will disagree, and then some other preparation will be found to suit admirably. The most common form is the tincture of iron; but it is better to give it in acetate of ammonia, which makes a very pleasant form of chalybeate, often readily assimilated when other forms have failed. When iron is given strictly as a hæmatic, it should always be given after food, and then it is digested along with the food. If given before meals in a bitter infusion, it is often not properly absorbed, especially if the bulk of fluid in which it is taken be small. The addition of a tumblerful of water to each dose will often aid in its absorption. When taken after food, when the stomach is full, the iron is diffused and so is more readily absorbed. It will not rarely be found that the lighter preparations of iron, as the ammonio-citrate or tartrate, are tolerated when the perchloride and sulphate do not agree. In convalescence this is especially seen.

In the management of anæmia, its causal associations must never be overlooked, and the importance of checking all drains upon the system is quite equal to that of the restorative treatment. The failure in the treatment of anæmia is very commonly due to the neglect of these important factors.

BOSTON LYING-IN HOSPITAL.

SERVICE OF DR. W. L. RICHARDSON.

REPORTED BY E. Y. BOGMAN, M. D., HOUSE PHYSICIAN.

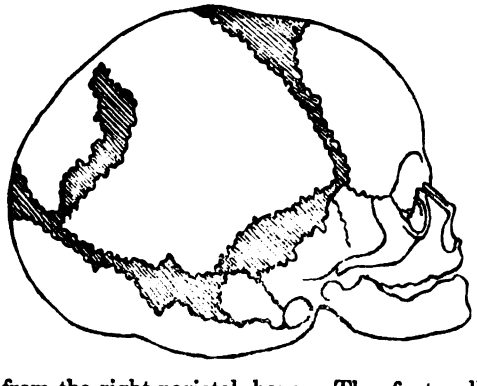
Twins; Abnormal Condition of the Cranial Bones. — E. L., born in Ireland; lives in South Boston; thirty-seven years old; single; first pregnancy; catamenia last seen November 22, 1875. She entered the hospital, in labor, at five P. M., August 30th. An examination showed the vaginal canal to be moist, the os dilated to the size of a "quarter dollar." The pains, which were medium in strength, occurred about every ten minutes. At eight P. M. an examination showed the head to be in the cavity of the pelvis and the large fontanelle to be presenting. This fontanelle was remarkably large, its boundaries extending beyond the edges of the os, which was dilated about two inches. The bones which formed its edges easily bent beneath the touch of the examining finger, and the sutures running out of it were very wide, the bones forming their edges also being soft and bending when touched. The four sutures running out of the large fontanelle were easily made out. The pains were strong, occurring every five minutes.

At 8.30 P. M. a change was found to have taken place in the presenting part. Upon the introduction of the examining finger it first touched a hard substance (bone) lying beneath the scalp. On feeling at either side, this hard spot was found to be apparently surrounded by what seemed to be wide sutures, the edges of which were very yielding to the touch and had no definite feel. Pressure upon this hard substance showed that it was movable, and not firmly attached to the surrounding bones. Further examination showed a wide suture running forward in the left anterior direction, where the large fontanelle was discovered. It was evident that the suture, from its direction, its leading into the large fontanelle, and its straight course, must be the sagittal, and the

presenting part must be at or near the posterior fontanelle; the position of the child, therefore, must be with the occiput in the right posterior. The lambdoidal suture could not be clearly felt.

The obscurity of the position arose from the presence of the movable bony substance above alluded to, which could be plainly felt at or near the small fontanelle, and the unusual mobility of the presenting cranial bones. The bony substance might possibly be one of the so-called ossa triquetra which are occasionally found in the sutures of the fœtal head. These, however, are commonly seen in the lambdoidal suture and are usually multiple. They are very movable, and their outlines can generally be made out. The feel to the touch is like that of a small islet of bone, whose margin corresponds with the character of the suture in which they lie. The abnormal mobility of the cranial bones suggested a hydrocephalic fœtus, but the head did not appear to be of an unusual size. A dead child might present a condition of the bones very nearly resembling those in this case, so far at least as the mobility was concerned. The fœtal heart, however, could easily be heard. Fortunately the proper management of the labor did not necessitate a more accurate diagnosis of the true condition, as the labor was progressing favorably. The urine was drawn with the catheter. At ten P. M. there had been but little advance; the pulse was 115. At midnight the pulse was 120; the thermometer was 100°. The head was slowly advancing. The os uteri was dilatable and easily pushed over the head during a pain. The patient's condition was good, and the head slowly descended to the perinæum. At eight A. M. she gave birth to a boy weighing four and a half pounds. A second head was found presenting in the vagina, and at 8.20 a male child weighing two and a quarter pounds was born. There were two placentæ. The uterus contracted well. A drachm of the fluid extract of ergot was given. The second child was very weak. Its skin was yellow, dry, and desquamating. It lived about forty-eight hours. The mother made a normal convalescence, and, with the child, was discharged from the hospital, well.

The peculiarity in the head of the first child, which could not be made out during labor, was as follows:[1] In the right parietal bone, posterior to and above its protuberance, was an opening or suture about an inch in length and three eighths of an inch wide. It curved downward, with its convexity forward, and its lower end nearly entered the sagittal suture. The portion of bone almost cut off by this opening, that is, the posterior superior angle of the right parietal bone, was readily movable under the touch, and resembled a bony peninsula running out from the right parietal bone. The fontanelles and sutures of the heads of



[1] For the drawing which accompanies this description I am indebted to Dr. Maurice H. Richardson.

both children were remarkably large, thus explaining the unusual mobility of the cranial bones, all of which were unusually thin.

Professor Humphry has called attention to the existence of these congenital fissures in some of the cranial bones. Their origin is of course due to incomplete ossification. They have been occasionally found in the frontal, the parietal, and the squamous portion of the temporal bones.

Ante-Partum Internal Hæmorrhage; Instrumental Delivery; Death. — L. C., colored; born in Framingham; lived in Boston; twenty-three years old; married; third pregnancy; catamenia last seen October 18, 1875.

August 18, 1876. Entered the hospital at 5.30 A. M., in labor. An examination showed the vagina moist, the os uteri nearly dilated, the position of the child to be occiput left anterior, with the brow presenting, the membranes ruptured, the waters partly escaped, and the first stage nearly completed.

10.30 A. M. The head was in the same position as at 5.30 A. M., but a large caput succedaneum had formed. The pains had increased in frequency and strength during the last half-hour. The patient groaned continually, and was very restless. The catheter was passed and the urine drawn. Dr. Richardson first saw her at 10.45 A. M., and on examination pronounced the presentation as above described, the head being crowded down, forming, with the large caput succedaneum, a complete plug to the nearly dilated os uteri. The patient was lying on her back. She gave evidence of great distress and some apparent difficulty in breathing. The pulse was rapid and somewhat feeble, and the respiration hurried. Upon introducing the forefinger to more perfectly verify the diagnosis of the position a sharp hæmorrhage ensued, which immediately stopped on removing the finger.

Diagnosis: Internal hæmorrhage from complete or partial separation of the placenta. Owing to the patient's condition it was thought advisable to deliver at once. Ether was administered. Upon the introduction of each blade of the forceps a loss of blood followed. The instruments were locked easily, but every attempt at traction was followed by very free hæmorrhage. The forceps were withdrawn, and upon introducing the left hand to attempt version, the hæmorrhage, as before, was profuse. The cord was pulseless. As it seemed evident that version could not be performed without too great loss of blood, and as the child was probably dead, craniotomy was performed with Smellie's scissors, and the child was easily and quickly removed with the cranioclast. The house officer carefully exerted compression over the fundus uteri during the extraction of the child. No loss of blood ensued after the removal of the child, who was found to be blanched, the cord passing round the neck, the body, between the legs, and once round one of them. The placenta was drawn down with the child, and lay just within the vagina and between the knees of the child. Ergot and brandy were given, and careful compression over the uterus was kept up. During the operations brandy was given whenever the character of the pulse called for its administration.

Dr. Warren, who happened to come into the hospital during the extraction of the child, kindly assisted during the subsequent treatment. No ether was given after the extraction of the child began. The pulse during the above operations and subsequently was very rapid, and at times became almost im-

perceptible, recovering its tone slightly, however, after each dose of the brandy. The patient's manner was restless. She complained of exhaustion. About half an hour after the operation was completed she began to sink. A drachm of ether was given subcutaneously and repeated in fifteen minutes. The first dose was followed by a marked improvement in the pulse. Heaters were applied to the feet, and stimulants (carbonate of ammonia and brandy) were administered, but with no good effect.

The second stage of labor was completed at twelve o'clock, and the patient died at ten minutes past one.

It was barely possible that transfusion might have succeeded in this case, but the necessary apparatus had been mislaid and could not be found.

LETTER FROM LONDON.

PROFESSIONAL MATTERS IN EDINBURGH.

MESSRS. EDITORS, — Your kind invitation to again become a contributor to your pages takes me back in feeling to more than twenty years ago. It was then my highest ambition to work for, and be thought worthy of, my native city of Boston. Can I do better now than say a few words of that other city to which in reality I owe all that I have ever become in the profession?

I have been passing August and September in Edinburgh, and after this nearly a quarter century of absence Auld Reekie has seemed to me, as then, a second home. The city itself has greatly changed. Many of the quiet streets of the new town, which gave it such a charm as a place of residence, have been invaded by trade. Others have been constructed in every direction, where then there existed but dairies and farms or country residences. The distinctive characteristics that marked Edinburgh so strongly from Glasgow have been largely effaced.

Professionally, however, Edinburgh has made a great onward stride. The renowned names that we of middle age used to venerate are mostly now of the past, but who can doubt that their places will be well filled? Vast sums have of late years enriched the university, enabling it to extend its influence, while the new infirmary, now rapidly approaching completion, will afford facilities for hospital instruction not surpassed in the kingdom, and in the hands of such men as Lister, Matthews Duncan, Alexander Simpson, and Granger Stewart, will attract medical graduates for special study, just as the old institution did in the days of their predecessors.

Most of those older men with whom it was my great privilege to be permitted to be intimate have now passed away. Lizars, one of the very first of ovariotomists, Simpson, Ziegler, Syme, Miller, Begbie, and Goodsir are gone. Of the younger men also there are many that have been taken: Warburton Begbie, whose place as a consultant seems rapidly filling by Granger Stewart; Hughes Bennett, with whom, invalided like myself at Mentone, I enjoyed daily intercourse during the winter preceding his death; and now within these last few days Laycock, who had been Bennett's successful competitor at the university, and the supposed unfair championship of whom, though I have ob-

tained evidence that the charge was unfounded, no doubt cost Simpson the coveted principalship, and thus indirectly hastened his death.

Of the older men, Dr. Gairdner and Sir Robert Christison remain almost alone; for Dr. Malcolm, although in years well advanced, is still so active and blithe that one can hardly think of him as beyond the fifties, and yet for half a century this gentleman has enjoyed the best of the purely midwifery practice of the Scotch metropolis, just as his father-in-law, the late Dr. Thatcher, so long the extra-academical professor of obstetrics, did for an equally extended period before him. Dr. Gairdner's professional career is practically over. He is now, at a very advanced age, confined to his room, and lives in the memory of those who knew him and in the fame of his distinguished son, the professor at Glasgow; but Sir Robert Christison still stands, a very tower of strength, both of body and of mind. Among my memories of Edinburgh in 1854 and 1855, none are more pleasant than those of the hours spent in Christison's lecture-room or as a guest at his house in Moray Place, where during my recent visit I have met with infinite cordiality. Discoursing of Walter Channing and of that famous visit of his to Edinburgh, which first inflamed my desire to see Simpson, and subsequently through Channing's kindness gave me the introduction which influenced my whole after-life, Sir Robert paid tribute to his versatile genius and charming companionship. It was my sorrowful duty that very evening, after the arrival of letters from home, to inform him of Channing's death.

With so much of interest on every side among the living, my own thoughts yet constantly turned towards the dead, and it was hard to realize as I stood down at Warriston, beside my master's grave, that I should never more see the dear countenance that, despite all that has been said by his detractors at home and abroad, belonged to a thoroughly honest and truthful man. Nearly my whole time in Edinburgh was spent in searching this question of Simpson's honor, which had been in certain quarters, and ever since his death, so bitterly assailed, and I failed to find the individual, even among his most inveterate enemies, — for the conflict of interests and personal animosities sever men in Edinburgh just as sometimes even in Boston, — who had ever heard a word or seen a line, either in print or in writing, from Sir James Simpson in assumption of more than his legitimate claims to honor. He had been the first to administer an anæsthetic in childbed; he had introduced chloroform to the profession as an anæsthetic after ether had been already employed. That he claimed more than this was but a delusion that originated in the minds of those who so cruelly wished to deprive him of the world's gratitude and affection. Even the men in Edinburgh who had most persistently contested with him in other matters have assured me that he was entirely misjudged by those who accused him of seeking any merit that belonged to another in connection with anæsthesia. Apropos of this subject, the late death at Boston under sulphuric ether, and in such skillful hands, has occasioned much comment in Edinburgh, as indeed elsewhere in Great Britain, and the feeling is becoming prevalent that had such accidents been searched for with the same untiring zeal as those under chloroform, others might have been made known that, of course unintentionally, have escaped the notice of the profession.

Of late years Edinburgh has had especial interest for gynæcologists in connection with Matthews Duncan's operations for the removal of uterine fibroids and Thomas Keith's remarkable success in ovariotomy. It was my good fortune to see Dr. Duncan extirpate an enormous fibroma that had begun in the superior uterine wall. Determining itself into the cavity of the organ rather than that of the abdomen, it had descended until it filled the whole vagina, and was so excessive in size that it had become impossible to pass the finger, or an instrument even, so as exactly to localize its point of origin. Attacking it at first piecemeal, Dr. Duncan was enabled after a few skillful sweeps of the scissors, by the so-called "spiral schnitt," to get at its insertion and to remove it bodily. The patient made a good recovery. Another case that interested me was the excision, by Prof. Alexander Simpson, of a large interstitial fibroid, much bigger than the fist, that occupied nearly the whole of the vesico-uterine septum, and hardly showed any tendency to enucleate itself towards the uterine cavity. The patient was an insane person at Laughton Hall, a private lunatic hospital in the vicinity of Edinburgh. Recovery here also took place, and a permanent restoration of the reason is hoped for, — Professor Simpson coinciding in my own views as to the very frequent dependence of mental upon uterine disease.

Upon discussing with Dr. Keith the question of his great percentage of recoveries after ovariotomy, I find that he himself is inclined partially to attribute them, as I had been led to do from what I had heard from his townsmen, to an extreme solicitude as to matters of minute detail. The avoidance of every disturbing cause, the most constant care in nursing, the greatest watchfulness on the part of the surgeon himself — these are among the points involved. Dr. Keith is at present patiently investigating the preservative influence of antiseptics as against peritonitis and septicæmia; he has great faith in them, as who has not who has had experience with them, however we may explain some of the evidence, positive and negative, that their use affords. I have myself in more than one instance, after peritonitis has set in, untwisted my wire sutures, re-opened the abdominal cavity, and washed out well all flocculi of lymph with a strong solution of carbolic acid, turning the patients upon the face, and draining them dry. Are we to be told that the convalescence was in spite, instead of in consequence, of the treatment employed, when up to that moment there had been a constant progress to the worse, and after it an immediate favorable change?

During my stay at Edinburgh the British Association for the Advancement of Science held its annual session at Glasgow, and I ran over for a day to attend the section of anatomy and physiology, with the chairman of which, Dr. McKendrick, of Edinburgh, I already had the pleasure of acquaintance. There were present many men of note, as Gairdner and Allen Thomson of Glasgow, Turner of Edinburgh, — who speaks well of his pupil, young Magnus Simpson, as an anatomist, — Burdon Sanderson of London, and Haeckel of Jena, and the discussions were exceedingly well sustained. The papers presented on this day were by Dr. William Stirling, of Edinburgh, on the Nervous Apparatus of the Lungs, a most admirable demonstration of personal discoveries; by Professor Arthur Gamgee, John Priestley, and Leopold Lar-

muth, all of Manchester, on the Physiological Action of Vanadium, Chromium, and Ortho-, Meta-, and Pyro-Phosphoric Acids; by Dr. Garner, of Stoke-upon-Trent, upon the size, etc., of the brain in Canidæ; by Dr. Romanes, of London, on the Nervous System of Medusæ; and by Drs. Brooke and Hopwood upon the Changes in the Circulation observed when Blood is expelled from the Limbs by Esmarch's Method. At the previous session the day before, papers had been read by Dr. F. M. Balfour, of Cambridge, on the Development of the Proto-Vertebræ and Muscle-Plates in the Elasmo branch Fishes; by Dr. Urban Pritchard, of London, on the Termination of the Nerves in the Vestibule and Semicircular Canals of Mammals; and by Professor Turner, of Edinburgh, on the Structure of the Placenta in relation to the Theory of Evolution. Dr. McKendrick's address as president of the section was an interesting contribution to the Physiology of the Mind.

Dr. Lauchlan Aitken, of Edinburgh and Rome, for for several years his health has compelled this gentleman to winter in the latter city, where he has without doubt the best of the American as well as the English practice, was with me at Glasgow. As he was one of Simpson's men himself, we have long had much in common, and what I have seen of him during my three years in Italy has done much to render agreeable the long exile. Dr. Aitken's papers upon the health of Rome, in the *British Medical Journal*, are familiar to American readers, who would have been sure to appreciate a most exhaustive letter upon the same subject, written by him in conjunction with our sculptor-poet, Mr. W. W. Story, and signed by both, that appeared last June in the *London Times*.

On the evening before I left Edinburgh Prof. A. R. Simpson returned from his week's visit to the United States, — a glimpse merely, but he had to be back on time for the purpose of meeting professional engagements. Arriving in Boston late in the afternoon he was compelled to leave for Philadelphia the same evening, but he expressed to me the liveliest gratitude to his old acquaintance, Dr. Warner, whose Scotch blood led him to board the China from the revenue boat before her arrival, and to render the professor and his wife, in more ways than one, very essential service.

Unfortunately compelled by the occurrence of true diphtheria in a member of my own family, I have had to give to this disease an amount of study and thought from which I would gladly have escaped. Thanks to the assiduous care and devotedness of Dr. Granger Stewart our patient has recovered, but the investigation into the causation of this sporadic case has brought to light certain evidence of such unexpected and startling character that hereafter I may venture to bring the subject before your readers. Since coming to London I have seen much of Dr. Edward Headlam Greenhow, of Middlesex Hospital, whose work on diphtheria, though published in 1860, is still an authority. It will be recollected that Dr. Greenhow was the first to suggest perchloride of iron as a topical application in this affection. He speaks in the kindest way of Dr. Bowditch and of the vast amount of fruitful professional work that he has accomplished. It is very pleasant to find so constantly that our British brethren have kept themselves familiar with what has been doing on our side of the water.

HORATIO R. STORER, M. D.

49 SOUTH STREET, PARK LANE, W., LONDON, *September* 27, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING OCTOBER 28, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	424	20.77	29.35
Philadelphia	825,594	323	20.34	22.24
Brooklyn .	506,233	168	17.24	24.92
Chicago . .	420,000	166	20.55	19.75
Boston . .	352,758	121	17.84	26.20
Providence	101,500	33	16.91	19.02
Worcester .	51,087	14	14.25	20.91
Lowell . .	51,639	30	30.21	20 55
Cambridge	49,670	18	18.85	23.31
Fall River	50,372	18	18.58	23.99
Lawrence .	36,240			25.96
Lynn . .	33,548	10	15.50	19.23
Springfield	32,000	6	9.75	20.93
Salem . .	26,344	5	9.87	22.92

Normal Death-Rate, 17 per 1000.

DR. ABEL BALL.

The daily papers announce the very sudden death of Dr. Ball at Philadelphia on Friday last. Dr. Ball had passed a long life in the practice of dentistry in Boston, and his loss will be deeply felt by numerous friends. He had an extreme tenderness of feeling, and in the practice of his profession, which was always large, he was especially considerate and kind in his treatment of children, and of his timid patients generally. He was an old-fashioned dentist, but he did a great deal of good work, and his patients generally went away well satisfied. In the warmth of his heart he was always ready, in various ways, to lend a helping hand to the needy, and no one was ever expected or even allowed to pay for an operation if the fee could not be well afforded. His purse as well as his heart was always open. Many years ago he had the misfortune to lose his wife, and since that time he has resided with his mother-in-law, who is now ninety-five years of age, and has been greatly dependent upon him. Dr. Ball belonged to a family of physicians, his father and his grandfather before him having been, each in his turn, the leading physician of Northboro' during the whole active period of his long life. Dr. Ball was taken away very suddenly, but he was fully prepared to go, and he has left a good name behind him. S.

Norfolk District Medical Society. — The regular meeting will be held in Bradley's Building, corner of Dudley and Warren streets, Roxbury, on Tuesday, November 14th, at eleven o'clock A. M. Papers, communications, etc.: —

1. Dr. F. W. Chadbourne, Salicylic Acid in Cystitis.
2. Dr. E. P. Gerry, Case of Intussusception.
3. Dr. D. D. Gilbert, Extra-Uterine Fœtation, with a Case.
4. Dr. S. E. Stone, Case of Fracture of the Base of the Skull, with Specimen.
5. Dr. Robert Amory, Local Boards of Health and the Duties of the Medical Profession relating thereto.

Lunch at 1.30 P. M. A. H. Nichols, *Secretary.*

Books and Pamphlets Received. — The Operations for Stone as observed in some of the London Hospitals, together with a Report of Cases from Private Practice. By A. Van Derveer, M. D., Professor of the Principles and Practice of Surgery in the Albany Medical College. (Reprinted from the Archives of Clinical Surgery, October, 1876.) New York: Rutledge & Co. 1876.

Sketch Plans for the Johns Hopkins Hospital, Baltimore.

Chemia Coartata, or the Key to Modern Chemistry. By A. H. Kollinger, A. M., M. D. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

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THE BOSTON
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ON THE TRAINING OF NURSES FOR THE SICK.[1]

BY JOHN H. PACKARD, M. D., OF PHILADELPHIA.

MR. PRESIDENT, — By the courteous invitation of your committee of arrangements I have the honor of offering to your association some thoughts on the subject of the training of nurses for the sick, a subject which has only within a very few years begun to attract in this country any attention at all, and which is deserving of far more general and practical recognition than it has as yet secured. A new departure has now been taken, and it is greatly to be hoped that the efforts made to establish and maintain schools for nurses will meet with the approbation of the medical profession and the generous support of the public.

Perhaps you will excuse me if I here dwell briefly upon the fact that in America the earliest movement in this direction was made in this city. The Philadelphia Nurse Society was in existence previous to the year 1852, but for how long a time or how actively I have been unable to ascertain. In that year it was united with the Philadelphia Lying-in Charity, then under the management of Dr. Joseph Warrington, and has been carried on with great success to the present day. This institution, however, has had for its main object the training of nurses for obstetrical cases. In 1872 the managers of the Woman's Hospital, who had for eleven years been carrying on a system of instruction of nurses for the sick, enlarged and improved that system by establishing regular courses of lectures, and their school received the first of several endowments, which have placed it on a permanent basis. We may, therefore, with pardonable pride claim for Philadelphia the credit of having, among American cities, taken the initiative in the matter of nurse-training.

At present there are, so far as I have been able to ascertain, only five schools of this kind in the United States. Besides the one just mentioned in this city there are two in New York, one in Boston, and one in New Haven. I have reason to believe that another is projected in connection with the Johns Hopkins Hospital in Baltimore.

This statement includes only the regular schools in which the nurses

[1] Read before the American Social Science Association, at its meeting in Philadelphia, in May, 1876.

are trained as for any other business or occupation. There are institutions of a religious character, such as the Bishop Potter Memorial House, connected with the Episcopal Hospital in Philadelphia, intended to develop attendants whose duties are more those of deaconesses or female lay-readers than of nurses, but they do not come within our present field of view.

Now when the population and social conditions of the large cities in the United States are considered, it will be evident, on the one hand, that the demand for nurses must be far greater than these five schools can supply, and on the other hand that the material out of which the best class of nurses can be made must be abundantly forthcoming. Hence it is highly desirable to inquire how the schools can be put upon the best basis, how they can be developed and increased in number, and how they may be conducted so as to evolve the highest and most useful results. The demand for trained nurses, just spoken of, is one which must not be supposed to be already active. There is certainly a need of them, and as soon as the public mind is conscious of this, and aware that the need can be supplied, the demand will arise. Once established, it will become more and more steady and positive.

The schools at present existing are under the control of volunteer associations, and are all attached either wholly or partly to large general hospitals. This feature — the hospital connection — is one of prime importance. Without it the training loses very much of its practical character; the great advantage of observation of collected cases and of competition with other pupils, the subjection to regular discipline, and the service under different physicians and surgeons are clearly unattainable elsewhere.

Since, on the other hand, the hospitals gain the service of nurses of good character and definite qualifications, who have higher incentives to activity, zeal, and faithfulness than the mere earning of wages, it is very much to be hoped that ultimately every large general hospital — perhaps we might better say every hospital — may become a regular school for nurses. Such an arrangement would give the hospitals a new claim upon the generosity of the public, since they would, in furnishing a continual source of supply of trained attendants for the sick, make a direct and by no means insignificant return for the support afforded them.

So far as I am aware, the only hospital in this country which has its own training-school for nurses, under the control of its own board of managers, is the Woman's Hospital of Philadelphia; and the managers, aware of the necessity for a wider field of instruction than is afforded by a special institution, have within a few months made arrangements for the admission of their pupils to the wards of the large hospital connected with the Blockley Almshouse. All the other schools are carried on by

organizations of a more or less independent character, acquiring hospital advantages only by special agreement with the authorities of those institutions.

Both the New York schools are under the supervision of a committee of seven ladies, — a standing committee of an association called the Local Visiting Committee for Bellevue and other Public Hospitals of the City of New York. This association is composed of volunteers working under the control and by the direction of the State Charities Aid Association, of which it forms a part. It is in concert, in its operations, with the State Board of Commissioners of Charities and Correction.

The Boston school is under the control of a board of directors originally appointed by the Woman's Education Society.

The New Haven school is managed by a committee of ladies, but I am not informed from whom they derive their authority.

The question will probably arise, as this important matter of nurse-training becomes further developed, whether it is or is not desirable that the government of the hospital and that of the nurse-school should be vested in one and the same body. It would perhaps be premature to discuss the point now, but I may say that there are great advantages attending the plan of having the nurses admitted, as at present, as pupils under an organization separate from that of the hospital management. The duty of selecting suitable women, of attending to many details of their life as pupils, and of arranging for their suitable employment after they are duly qualified, can be much better fulfilled by a special committee or board than by those already charged with the administration of the affairs of a hospital. Such an arrangement does not necessarily involve so much risk of collisions or conflicts of authority as might, *a priori*, be supposed. A great deal of tact and judgment might be demanded on the part of all concerned, including the medical staff, in getting a double arrangement of this kind into smooth working order, but the ultimate result would probably be worth all it cost.

Another question arises, whether it would be better to have a general association in each large city, as for instance in Philadelphia, where there are twelve hospitals, to take charge of the organizing of schools and to constitute a central bureau of administration. Desirable as such an arrangement might seem in the abstract, it would probably fail to work well, at least in the existing state of things. Such a bureau, unless managed with wonderful discretion, would be very unapt to harmonize with a number of separate and altogether independent boards, such as those controlling the various hospitals.

The probability is that schools of this kind will be developed in most cases by ladies interested in the visiting of hospitals, or sometimes by the action of the board of managers, inviting the coöperation of such

persons as are known to them to have the requisite judgment and experience.

The regulations of the existing schools do not vary in any very material points, the greatest difference being in the term of instruction. This is, in Boston and New York, two years; in New Haven, fifteen months; in Philadelphia, one year. I cannot but urge that in a matter like this the expenditure of two years is surely not too much. It must be remembered that the training of these nurses is a matter which involves the comfort and perhaps the lives of those of whom they are to take charge. We should hardly expect to get an ordinary house-servant, a waiter, or a chamber-maid, certainly not a cook, into thorough training in one year. A nurse who had had twelve months of judicious instruction would undoubtedly be better than one who had only natural qualifications; but I cannot think that the average of pupils could, after so short a time, claim a certificate of proficiency.

Applicants for instruction must be, in New York, between the ages of twenty and thirty-five; in New Haven, between twenty and forty; in Philadelphia, between twenty-one and forty-five; and in Boston, between twenty-five and thirty-five. Without laying much stress upon this, it may be suggested that maturity of physical constitution and the stability of purpose which belongs more to twenty-five than to twenty would make the former in most cases the preferable limit; while by declining to afford instruction to those over thirty-five years of age we may exclude many women who would be capable of long and valuable service. On these points, as well as in regard to the other physical and mental qualifications of applicants, there is room for much discretion on the part of those to whom the matter of admissions is entrusted.

In the New Haven school it is especially stated that the rough work of the wards is to be done by convalescents or other persons appointed by the steward. This seems to me to be objectionable. There cannot be any thorough instruction which does not include every detail of the care of the sick-room. When hospital wards need scrubbing, the patients should be removed from them, and they should be cleaned just as any other rooms would be; but all the work of attendance upon the sick should be made a matter of practical experience with the pupils.

Let us now consider what instruction is required. The comfort of the sick, and often their recovery, may be truly said to be the result of a mass of details. A thorough practical understanding of these details is indispensable for a good nurse.

Among them may be mentioned the management of the lighting, ventilation, temperature, cleaning, and tidying of the room; the changing of bed-clothes and body-clothes; the handling of the patient; the avoidance of noises; the administration of medicines; the proper reception

and removal of discharges; disinfection, and the preparation and administration of food. Besides all this there are in many cases, and particularly in surgical cases, special matters to be attended to, such as the preparation of dressings and other appliances for use at the time of the surgeon's visit. Another most important function of the nurse is to watch the patient, and to give the physician a clear and faithful report of what takes place between his visits.

Now all these are matters which can be taught only by steady, constant, patient drilling, and that almost wholly at the bedside. What we want in a nurse is an attendant for the sick, one who has a practical familiarity with what is to be done and the best way of doing it. In the vast majority of cases it would be idle to begin the training of a nurse by giving her lectures on anything. This form of instruction is one which can be of benefit only to those who have had a certain amount of experience in receiving it. At a later stage, when the bedside duties have become familiar, it may be very well that the principles on which they are conducted should be clearly and simply laid down. But I submit that a nurse may be taught to keep the air of a room pure without having ever heard of ozone or knowing anything about the germ theory. To begin the training of a practical attendant upon the sick by lectures on chemistry, or even to introduce these at any stage of her instruction, seems to me to be a mistake. We do not want a scientific person; we do not want a person with theories of her own, or with a smattering of other people's theories. There is one of our nurse-schools in which the pupils are given lectures on the eye and on the ophthalmoscope, on poisons and their antidotes, on the examination of the urine and the taking of accounts of cases, and on pyæmia. Bandaging and the treatment of fractures have also been taught, and in the English schools anatomy and physiology are made parts of the course.

Now I am well aware that these remarks will offend some, who would argue that no knowledge is useless, and who would like to see the nurse occupy the most exalted position she could attain. But I think that my views will stand the test of common sense.

In the first place, we add to the expense of developing the nurse without really improving her. Of what use is it for her, more than for any one else, to hear lectures on the eye and the ophthalmoscope, subjects which occupy the earnest and constant study of highly educated men, and can be pursued to advantage by those only who give their whole time and attention to them? The knowledge of poisons and their antidotes, to be of any avail whatever in emergencies, must be clear and complete, and involves a degree of acuteness in diagnosis and an extent of acquaintance with medical practice which are beyond the possibilities of nurse-training.

Pyæmia is one of the obscurest subjects in pathology; it recently

occupied the attention of one of the leading medical societies in London for several meetings, and the only result of the debate was to show how ignorant the distinguished gentlemen who took part felt and confessed themselves to be in regard to the matter.

As to the taking of accounts of cases, I have only to call attention to the rarity with which this is well done even by regularly educated physicians. Few residents in hospitals have the ability to do it; and there are many experienced practitioners, men of great skill and attainments in other respects, who have never acquired this faculty.

One consideration seems to me to dispose of the idea of teaching nurses to treat fractures. This is that the great majority of suits for malpractice brought against physicians are in cases of this kind. Should it appear in evidence that the details of treatment of a case in which the result was unsatisfactory had been entrusted to a nurse, there is little doubt that a jury would allow damages, and as little doubt that their verdict would be just.

I have said that superfluous training made the development of the nurse more costly, and this is true, even though the lectures be given free. The time and labor bestowed cannot count as nothing merely because no money equivalent is demanded for them. Not only the time of the teacher in the preparation and delivery of the lectures and demonstrations, but the time of the pupil in hearing and digesting them, must be reckoned as expended; and if it does not go directly to make the nurse, as a nurse, more efficient, it is so much added to the outlay without adequate return.

I have dwelt more particularly upon this point because it is one in respect to which there are great liabilities to error on the part of those who most desire the success of nurse-training. There is a certain seductiveness about the idea of an elevated standard of teaching which is very apt to obscure the exact aim to be attained. Let me, *per contra*, say that so far as I have been able to procure testimony on the subject, the nurses who are supplied by our training-schools in this country have given great satisfaction to those who have availed themselves of their services. The statements made to me are very positive and ample, and it would seem that, as was remarked at the commencement of this paper, the public had only to be made aware that there was a supply of trained nurses available, to awaken an active demand for their services.

Experience has shown that the average cost per annum of each pupil is from two hundred to four hundred dollars. In this city, the former sum is given me as the estimate; and the length of time that the school has been in operation seems to warrant its being regarded as a fair standard. But circumstances might readily occur which would increase the cost in certain years and in particular institutions. For our present purpose it is sufficient to show that the luxury of trained nurses is far from being an expensive one to the community.

There are many matters of interest in connection with the subject of this paper which I have not touched upon, and it would have been a labor of love for me to have dwelt at greater length upon those discussed, had my time permitted. My endeavor has been to contribute an honest mite to the advancement of a cause which well deserves far abler pleading.

A CASE OF AORTIC ANEURISM TREATED BY ELECTROLYSIS; FAILURE.

BY JOHN HOMANS, M. D.

James M., fifty years old, entered the Carney Hospital July 31, 1876, with an enormous aneurism of the arch of the aorta. The tumor had pushed through the walls of the thorax in the upper left pectoral region, forming an external pulsating swelling as large as a man's fist. The heart was crowded downwards and backwards, and the lung was displaced and more or less compressed by that part of the aneurism within the chest. The patient had always been healthy, and had worked hard. Four years since, one end of a stone which weighed two tons fell upon his chest and crushed him against the side of a ditch in which he was digging. He was released in a few minutes, but was not able to work for a week, and complained of soreness in the left pectoral region for several weeks. During the last two and a half years he has suffered, at times, severe pain in both pectoral regions, running through to the back and down the left arm; lately he has had slight dyspnœa and œdema of the lower extremities. The aneurism began to enlarge externally thirteen months ago.

On August 2d five gilded needles, insulated to within a quarter of an inch of the point, were inserted into the sac of the aneurism; the needles were pushed inwards about an inch and a quarter beneath the skin, and when all were inserted they described a circle round the apex of the tumor. Dr. J. J. Putnam was so obliging as to superintend the battery (Stöhrer's). He connected the needles with the positive pole, and joined the negative pole to a large metallic disk which was covered with a compress wet with salt and water. This was applied to the epigastric region, and was moved about occasionally. The patient was a little excited, and had a flushed face, with a pulse of 124. The following is Dr. Putnam's account of the operation: —

"The battery used was the ordinary Stöhrer's, freshly filled with a solution of bichromate of potash in diluted sulphuric acid. The needles were kept throughout in connection with the positive pole. Sudden interruptions of the current were avoided, and the pad at the negative pole was moved from one part of the chest to another as the skin beneath it became irritated.

"The number of cells employed varied from eight to ten, which was all that the patient could bear without much pain, the aim being to keep the needle of a galvanometer intercalated in the circuit constantly at a deviation of about forty-two per cent.

"The needles were kept in the aneurism during forty minutes, but since, after a time, the skin around some of them became slightly discolored, either bluish or pale, and somewhat sunken over a circle about two millimetres in diameter, these were removed and fresh ones (of steel) were inserted at neighboring points, ten punctures being made in all. Bubbles of gas and a little dark blood followed the needles as they were withdrawn."

The patient was bright and courageous during the operation, but after the needles were removed he became rather pale, and the extremities were cold. A cup of warm tea revived him, however. He stated that the insertion of the needles was the most painful part of the operation. The next day the pain through the back and down the arm was reported to be less than before the electrolysis. The tumor looked somewhat blue. On August 14th the patient reported that the pain above mentioned was very slight. His feet were still œdematous, and he complained of occasional dizziness. There was no albumen in the urine. On August 15th electrolysis was repeated; the tumor was then somewhat larger than when the patient entered the hospital.

"The second operation did not differ materially from the first except that steel needles only, insulated as above mentioned, were used, and one or two of them were removed and were not replaced in the course of the operation. The depths at which the needles had been inserted, measured from their points of junction with the skin, were found to be respectively two, one and a half, one and one fourth, one and three fourths, and one and five eighths inches.

"The insulation used consisted of several layers of a thin solution of shellac in alcohol, which was applied while the needles were as warm as the hand could bear, and this coating was found on the whole to work well, although on the withdrawal of some of the three-cornered needles it was found to have chipped off at a few points along their edges."

The second operation was more painful than the first, the patient experiencing a burning sensation while the current was passing. On August 21st he left the hospital, convinced that his pain was less than when he entered. The tumor, however, was larger, and the impulse was about the same.

RECENT PROGRESS IN OTOLOGY.

BY J. ORNE GREEN, M. D.

Histological Changes in the Labyrinth in certain Infectious Diseases. — Moos [1] gives the result of his microscopic investigations on the histological changes which occur in the labyrinth during typhoid fever, scarlatina, and variola. His observations embrace the clinical history and dissection of the ears in six cases of typhoid and in one each of scarlatina and variola; they are of interest as contributions to our knowledge of the possible results of those diseases, and help to explain some of the permanent changes in the ear which have been observed, but they cannot, nor is it claimed that they can, be considered as explanatory of the very frequent disturbances of the ear met with in these and other fevers during life.

In typhoid fever previous observations by Griesinger, Schwartze, Hoffman, Virchow, Marcus, and Politzer have demonstrated a variety of pathological changes in the ear, all of them of an inflammatory character; they are thus enumerated by Moos: "catarrh of the fauces with closure of the Eustachian tube; free secretion in the cavum tympani (Griesinger), often in great quantity; injection of the tympanic mucous membrane; purulent catarrh of the tympanic cavity, with its consequences; perforation of the membrana tympani, dislocation and loss of the hammer and anvil, inflammation and inflammatory maceration of the cells of the mastoid process and of the facial nerve; propagation of the inflammation to the meninges (Schwartze, Hoffman); inflammation of the parotid gland, with rupture into the external ear (Virchow, Hoffman); hyperæmia of the inner ear, in the vestibule, cochlea, and the semicircular canals (Marcus, Politzer, and Schwartze); ecchymoses in the vestibule and lower part of the cochlea, but not in the semicircular canals, together with ecchymoses in the tympanic cavity and in the bony tube (Politzer); finally, Toynbee has observed and described cases of typhus in which the apparatus of the organ was completely annihilated, the nervous apparatus being wholly disorganized, the fluid in the cochlea and vestibule of dark color and tinged with blood." Cases of typhoid have also been described in which disturbances of hearing existed and yet dissection showed no appreciable lesion of the ear, and Schwartze has explained these by assuming anomalies in the nervous centres, such as hyperæmia and anæmia of the brain or its meninges, or by the peculiar action of the typhus blood on the brain.

In addition to these the observations of Moos now show that, at least in some cases, the minute structures of the labyrinth are diseased. As the result of his microscopical examinations he says, "We shall find that in ileo-typhus the entire labyrinth is very often affected, and on

[1] Archives of Ophthalmology and Otology, vol. v., No. 2.

both sides. Any portion may be attacked. The parts which suffered in all the cases were the utriculus, sacculus, ampullæ, and lamina spiralis membranacea. The parts exceptionally involved were the semicircular canals and the zona ossea. The parts most essential to good hearing were regularly affected. Whether this stands in any connection with certain peculiarities in the normal distribution of blood-vessels, I cannot at present decide. Histologically the affection is an infiltration with lymphoid cells or a small-cell infiltration. With the exception of a single case in which fat-granule cells were found beside the small-cell infiltration, with the same anatomical distribution and in almost equal abundance, the latter was the only and the constant new formation."

In the six typhoid cases examined, this small lymphoid cell infiltration was found in the important parts of the labyrinth in all; in three of these cases the membranous labyrinth was discolored and yellowish, in two of them no mention is made of the color, and in the other it is distinctly stated that there was no hyperæmia or discoloration. In four of the cases there was distinct purulent inflammation, in one hæmorrhagic inflammation of the tympanum, and in the other case the tympanum was not examined, except a small portion of the mucous membrane of the promontory, which was found thickened. In both the scarlet-fever and variola cases there was purulent inflammation of the tympana; in the former the membranous labyrinth was adherent and abnormally vascular, with a small-cell infiltration of its important parts; in the latter was pus-cell infiltration, and the membranous labyrinth was thickened and yellowish. From this it is seen that distinct inflammation of the tympanum existed in seven cases, and was probable in the only case not examined, where the small-cell infiltration existed in the labyrinth; an important fact when we remember the intimate connection between the circulation of the tympanum and that of the labyrinth. To be sure, a distinct hyperæmia of the labyrinth was found in only one case, but in five of the other seven cases the labyrinth was discolored, and this discoloration was also found in the variolous case, where the labyrinth was in a state of purulent inflammation, as shown by the pus cells. Moos's examinations of typhoidal ears during life show that marked hyperæmia of the tympanum is not present even when purulent inflammation exists, and from this fact he concludes that the development of the disease of the tympanum is gradual. Might he not have applied the same reasoning to the labyrinth, and have concluded that, at least in his cases, the disease of the labyrinth was the result of a slow inflammation? Instead of that he prefers to leave the question whether we have to do with a specific new formation, peculiar to typhoid, or merely with a simple state of irritation, an inflammation, open for further investigation.

In favor of the specific typhoidal character of the disease, he says, is

the fact that it occurs in both sides, and that the small-cell infiltration of the labyrinth resembles the changes which occur in the intestinal mucous membrane, in the kidneys, liver, and peritoneum during typhoid. Against this is the existence of purulent inflammation of the tympanum, the thickening and discoloration of the labyrinth, and, more than all, the fact that the same disease was found in other than typhoid cases.

The Diagnosis of Auditory Vertigo. — At the last meeting of the British Medical Association, W. R. Gowers, M. D., read a paper with the above title, in which he calls attention to some symptoms or rather complications of auditory vertigo which have never before been mentioned. The slight apparent association of the vertigo with the ear and the prominence of gastric symptoms frequently mislead both physician and patient; the paroxysms of vertigo often lead to vomiting, but occasionally only to dyspepsia, which is assigned as the primary cause of the vertigo. In addition to the acute paroxysms felt in auditory vertigo, there is also a more or less continuous sense of disturbed equilibrium, which renders the stomach peculiarly sensitive to functional disturbance. The differential diagnosis between auditory and gastric vertigo can be made generally from the paroxysmal character of the auditory variety, from the character of the sensation, and from an examination of the functions of the ear. In auditory vertigo there are distinct paroxysms, much more intense than are found in other varieties of dizziness. Gastric vertigo is indefinite; auditory definite, with a distinct sense of movement in a certain direction and often a distinct movement in that direction. In auditory vertigo examination will show an impairment of the nervous structures of the labyrinth, with tinnitus and deafness, the vibrating tuning-fork on the bones of the head being especially valuable in diagnosticating this condition.

Two cases are given. In one, auditory vertigo with labyrinthine disease in the right ear existed together with loss of taste and smell; gastric ulcer was also found, which obscured the diagnosis till the paroxysmal character of the vertigo and the fact that the patient always fell to the right side and backwards made it evident that the ear was the offending organ. In the other case there was slight dizziness with dyspeptic symptoms which were thought to be the cause, but distinct paroxysms of vertigo in which the patient fell with great violence to the right side, and the decided evidence of disease in the left labyrinth, showed, however, that the vertigo was auditory and not gastric. In this last case it is of special interest to note that a hearty meal after long fasting brought on a severe and characteristic paroxysm of the vertigo.

Treatment of Otorrhœa. — Paulsen[1] claims to have met with excellent results in the treatment of otorrhœa, uncomplicated by caries or

[1] Monatsschrift für Ohrenheilkunde, No. 2, 1876.

large polypi, by means of a mixture of carbolic acid and olive oil, ten parts of the former to one hundred of the latter. He has found it much more effective than astringents or other methods which he has tried, and the combination of the acid with the oil was much better than the acid with water. His method of application is to cleanse the ear thoroughly by cotton or a probe, avoiding syringing unless it is absolutely necessary, and then, dipping a tampon of cotton in the solution, to apply it to the secreting surface and there leave it till the next day, when the same process should be repeated. In this way he has succeeded in relieving obstinate otorrhœas even when complicated by small granulations.

Politzer[1] gives a résumé of his experience in the use of caustic solutions of nitrate of silver in the treatment of otorrhœa, as recommended by Schwartze. He had already found concentrated solutions of nitrate of silver useful in the destruction of granulations in the external meatus and on the drum-membrane, but weak solutions he found of comparatively little value in simple chronic suppuration. Stimulated, however, by Schwartze's publications of 1868 with regard to the caustic treatment of purulent aural catarrh, in which solutions of twenty grains of the salt to an ounce of water were used, he was led to try this in simple, uncomplicated otorrhœa, and now advises the use of even stronger solutions than those of Schwartze, namely, one part of the salt to ten or eight of water. Great stress is laid, however, on the method of application, and it is probable in practice that failures often result from the want of attention to these minutiæ and from the lack of personal attention on the part of the physician. Above all it is important that all secretion be removed from the middle ear by inflation, either with the Politzer-bag or by the catheter, and that then the meatus be thoroughly syringed out; this being done, the meatus must be carefully dried by pledgets of lint or cotton, in order that the solution may come in contact with the diseased mucous membrane. Any secretion left in the ear will unite with the silver to form an albuminate of silver.

For cauterizing the middle ear ten to fifteen drops of the solution should be poured into the ear with the head inclined to the opposite side; if the drum-membrane is largely destroyed, the solution readily finds its way into the tympanum; if, however, there is but a small perforation, it is necessary to inflate the tympanum or else to force the solution into the cavity by pressing the tragus down against the meatus. The only unpleasant results met with in these applications were smarting in the pharynx when the solution ran down the Eustachian tube, and a dizziness produced by the pressure on the labyrinth: the former passes off in a few hours, and the latter is relieved by inflation of the tympanum.

[1] Archiv für Ohrenheilkunde, ii. 1.

It is necessary that the solution should remain in the ear long enough to produce a decided slough of the membrane, and for this purpose one to two minutes is sufficient. A less time than that merely produces a grayish sediment from the union of the silver with the epithelium and mucus, and this comes away in a few hours at the longest, while an effectual slough does not come away for twenty-four hours or even longer. The superfluous solution, after producing the slough, should be syringed out. Neutralization by means of a solution of salt, as advised by Schwartze, is not considered necessary by Politzer. The action of these concentrated silver solutions in checking the discharge is less dependent on the duration of the disease than on the condition of the mucous membrane and the general health, and it is also more certain where there are no granulations, although Politzer has seen such granulations disappear very rapidly under this treatment.

Schwartze's claims that a nearly certain cure followed the use of the caustic applications where the otorrhœa was uncomplicated are not confirmed by Politzer, but in cases where it was used and failed to check the discharge he has afterwards frequently obtained a good result from the insufflation of pulverized alum in minute quantities, and he considers the combined use of the concentrated silver solution and the powdered alum as the most effectual method of treating chronic suppuration of the middle ear. He recommends that, if after eight or ten applications of the caustic, the secretion does not diminish, the alum be used.

The same care should be used in applying the powder as the silver; the ear should be thoroughly cleansed and dried and the powder blown in in small quantities against the secreting surface, the physician satisfying himself by inspection that the surface is covered white. If the secretion is not profuse, the powder will remain in the ear at least two days, and if on the third day the powder still remains dry and in position, it is recommended not to syringe the ear, but to allow the powder to chip off of itself. If, however, the powder has become moist, the ear must be thoroughly syringed to free it from the masses of alum and secretion which occasionally adhere so firmly as to require also some careful manipulation with the probe for their removal. As experience teaches that, frequently, by the day after the syringing the secretion has ceased entirely, it is advisable not to make the next application till satisfied by waiting that the discharge still continues.

(To be concluded.)

PROCEEDINGS OF THE OBSTETRICAL SOCIETY OF BOSTON.

C. W. SWAN, M. D., SECRETARY.

MARCH 11, 1876. The president, DR. HODGDON, in the chair.

Erysipelas and the Puerperal Condition. — DR. BOARDMAN reported the following case: Mrs. M. was recently pregnant six or seven months with her fourth child, the exact duration being unknown, as the catamenia had not been present since the birth of her previous child. In consequence of receiving two severe blows in rapid succession upon the left side of her abdomen, the membranes apparently were ruptured, and a large amount of fluid escaped from the vagina. Two weeks later labor was completed suddenly, and a living child was forced from her while she was standing. Two days later the child died. During the day on which she was confined one of her children complained of feeling unwell, and of pain in the side of his face. On the following day he presented a well-marked facial erysipelas upon this side, which subsequently involved the entire face and scalp, and was attended with very high fever. Convalescence became fully established on the eighth day, the disease running a normal course. During his week's illness he was confined to his bed, alongside that of his mother. It is a rare occurrence for a puerperal woman and a patient with erysipelas to *remain* in such immediate juxtaposition, and the result was watched with no little anxiety as well as interest, especially when we consider that the several accidents in the interval must have had a prejudicial effect upon the system of the woman in childbed, and may, perhaps, have rendered her condition more favorable for the reception of the erysipelatous poison to which she was exposed so greatly. Fortunately, however, she recovered rapidly from her confinement, without any unusual or unfavorable symptom. Dr. Boardman remarked that it is held by some writers that idiopathic erysipelas possesses no element of danger in connection with the puerperal condition.

DR. SINCLAIR said that he had raised a similar question in reference to a case which had come under his own observation. Two weeks before, he had seen a lady with puerperal peritonitis in a house in which scarlet fever had occurred. Her disease began two days after a normal labor, and she died eight days later, or ten days after confinement. Scarlet fever broke out in the oldest child one week before the confinement. Query: Had the scarlet fever anything to do with the puerperal disease? The woman was enormously swollen, with a good deal of tenderness, but no localization of the disease in any particular part of the abdomen. There was no diarrhœa.

Sudden Death, probably from Embolism. — DR. REYNOLDS reported the case of Mrs. S., primipara, well nourished and twenty-five years of age. One week before delivery the urine deposited, on being boiled, one eighth of its bulk of coagulated albumen. There were no casts, and the patient had no symptoms threatening eclampsia. The bowels were sufficiently open. She was ordered twenty drops of tincture of iron thrice daily, and a daily dose of sulphur and bitartrate of potash. The first stage of labor continued through the night of February 19th and all day on the 20th. At four A. M. on the

21st the os was well dilated, and the membranes gave way. At nine A. M., the pains being unsatisfactory, and the head being unable fairly to descend into the excavation, the forceps were put on, and after a very easy extraction a living girl was born. The placenta followed immediately. No hæmorrhage occurred. The patient was very restless and fidgety during labor, but otherwise did well enough.

Mrs. S. proved unable to nurse. For many days the lochia were offensive, and the vagina was daily washed out with warm water. There was unusual lameness of the back and hips, and difficulty in moving herself. The pulse and temperature presented nothing remarkable. Dejections occurred spontaneously. The appetite was very poor, and there was much thirst. On the tenth day and the days succeeding the patient complained of slight pains and tenderness in the left calf and over the left femoral vessels. The left leg was kept flexed and on a pillow. There was never any œdema. Quinine and iron were, from the fourth or fifth day, freely administered, and the leg was enveloped in batting covered with oiled silk. On the thirteenth day a ten-grain Dover's powder procured an admirable night. The patient was unusually well and cheerful on the following day, and ate her dinner at noon with great relish. At 3.40 P. M. she was attacked with cardiac distress; she grew unconscious in three minutes, and died at 3.50 P. M. An autopsy was not allowed, though earnestly sought.

Supposed Case of Puerperal Thrombus. — Dr. Minot reported the case, which he saw in consultation with Dr. Bickford, of Charlestown. A young woman, primipara, pale, and not strong, was confined without accident and remained in bed for two weeks afterwards. On the second day after she had begun to sit up she was seized with severe pain in the chest and urgent dyspnœa, and had a rapid pulse. On the next day there was a little improvement, but the action of the heart was exceedingly rapid and very feeble, and the pulse was weak. An examination of the legs revealed no tenderness or swelling. The patient did well, and recovered perfectly. In answer to questions Dr. Minot stated that he advised digitalis, which was given, ten drops of the tincture, to be increased to fifteen, three times a day. The patient began to improve very soon after taking it. Stimulants were also given.

Large Uterine Fibroid attached to the Posterior Lip and complicating Labor. — Dr. Homans, remarking that he had reported the case of this patient at previous meetings of the society, said that she had been confined a fourth time three weeks ago. At the first confinement there was great difficulty in extracting the child. The tumor was then of the size of a big fist. The second child, small, was born about fourteen months after the first, at the eighth month. When the patient was seen the waters had broken and the head was presenting. Delivery was accomplished by forceps. The third labor was at the seventh month, and the child was born before the arrival of the doctor. The fourth labor was at six and a half months. The first tumor was still present, and opposite to it was a second of equal size. The fœtus was drawn away, but the placenta was left behind till the next day, when it was expelled by the uterus, fifteen drops of the fluid extract of ergot having been given every three or four hours in the interval. The two tumors remain, and there

is, apparently, a third tumor in the body of the uterus. Examinations at other times than at the labors have not been permitted.

Dr. Lyman said that it is stated that these tumors develop with the development of the pregnant uterus, and that after labor they disappear by undergoing with the uterus a process of involution. When they do not undergo this process he did not see why these tumors should not be removed. He mentioned the case of a patient who at the time of delivery had quite an uncomfortable tumor which, within a year after labor, had entirely disappeared.

Dr. Chadwick said that there was no doubt that such tumors disappear during the puerperal period. He had heard Scanzoni refer to the case of a tumor which at labor was as large as a cocoa-nut. Four months afterwards there were no traces of it. He had seen at South Weymouth a pregnant woman with a fibroid tumor as large as an orange, situated in the anterior wall of the uterus. Three months after delivery the tumor could not be found, and had been probably absorbed. Dr. Chadwick remarked upon the curious fact that fibrous tumors are apparently no obstacles to conception, which takes place as frequently with as without the presence of the tumor.

The Horizontal Position as Effecting Retroversion of the Uterus. — Dr. Lyman reported the following case. A young lady, who was a school-teacher and single, said to him that although she might walk about all day without trouble she dreaded going to bed, as the moment she lay down she had great pain in the back; she could find no comfortable position, and her sleep was in consequence much disturbed. She had had no pelvic difficulty, although the catamenia had been a little more free the past year or two. She was examined, first, in the standing position, and the uterus was found to be normally erect; when the patient lay down there was very slight retroversion. A small Hodge's pessary was introduced, and for the first time for months she was able to sleep with comfort. The patient has since reported the greatest possible relief from the application.

A Group of Related Cases, some of them Diphtheritic. — Dr. Wellington reported these cases. Mrs. A., aged about thirty, was delivered of her second child on Wednesday, February 16, 1876. The labor was natural, and the child did well until Saturday, February 26th, when, the cord having separated, the umbilicus became red, and this was followed by ulceration and a purulent discharge. The inflammation extended for a space of two inches or more around the navel, with swelling and infiltration, and an erythematous blush spread still farther over the anterior surface of the body. At ten o'clock on the morning of the fourth day, the child, who in the mean time had apparently been getting on pretty well, seemed tolerably bright and appeared to warrant a hopeful prognosis. An hour after, it died.

On Sunday, February 27th, the day after the appearance of the erysipelas in the baby, the mother began to have swelling of the external genitals, with much excoriation, and painful micturition. The swelling was very great and the suffering intense. Dr. Wellington had never before seen so severe an inflammation of these parts occurring after confinement. No membranous exudation was noticed. Two or three weeks elapsed before recovery.

Before delivery there had been a good deal of itching of the external

On Tuesday, February 29th, the day of the death of the baby, the older child, a little girl three years of age, was taken with vomiting, became very feverish, and had a sore throat. The next day there was an eruption, which lasted only a few hours. The throat became very bad, the tonsils were greatly swollen, and the whole throat was covered with a diphtheritic membrane. This afterwards peeled off, leaving a raw surface, from which blood exuded freely. There was considerable epistaxis. The membrane extended to the larynx and trachea, and the child died with symptoms of membranous croup on Sunday, March 5th.

On Saturday, March 4th, the father, who had become worn out from taking care of the children, and for two or three days had suffered from sleeplessness and various nervous symptoms, had fever and sore throat, with diphtheritic effusion, and became seriously sick. He recovered in about a fortnight.

These four cases, which occurred in a family of four persons at nearly the same time, two of the cases proving fatal, formed a singular and sad complication.

One additional fact is worth stating. The child who died of diphtheria was carried to South Abington for burial. The coffin was opened on the day of its arrival, and the body was seen by several of the relatives. One of these, a gentleman twenty-two years of age, two days after was taken with diphtheria. He was seriously ill, but eventually recovered. There had been no previous case of diphtheria in that town. The disease was prevalent in some of the adjoining towns, but this gentleman had not been exposed to it.

Dr. Sinclair recalled the case of an older child who had erysipelas beginning at the vulva. Death occurred with great suddenness.

Dr. Minot added the case of a child thirteen weeks old, in whom the disease began on the nates and spread all over the body. The patient was much prostrated, but recovered completely. In another case the inflammation, which resulted from vaccination, migrated over the whole body. This child also recovered.

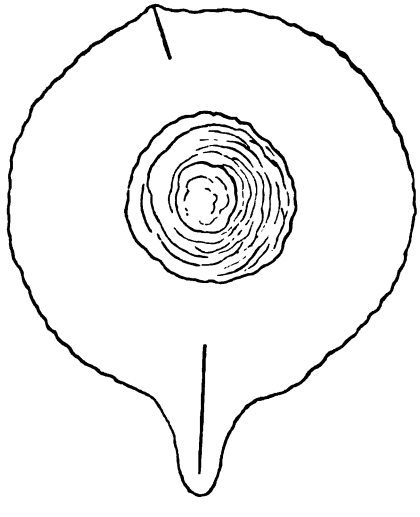
Dr. Hodgdon reported the case of a child in whom erysipelas began on the shoulders and traveled to almost every part of the body, healing at one part and extending in another. This patient recovered. In another case, in which the disease began two days after birth, the whole surface of the body was invaded, and death resulted at the end of two weeks. There was great fever, but no formation of pus.

Dr. Stedman said that infantile erysipelas was generally fatal. He had been taught to recognize as a distinct affection the so-called erythema fugax, resembling and often confounded with erysipelas, but without the fatal tendency of the latter. Dr. Stedman had attended many labors while he had other patients with erysipelas, scarlatina, suppurating wounds, etc., and till lately had made frequent autopsies, without evil results to lying-in women. Great care and cleanliness were matters of course to an obstetrician, but if erysipelas and scarlatina, as well as puerperal diseases, required the abandonment of one's midwifery cases, he did not see how a practice was to be carried on. A medical friend, Dr. A., desired him to take charge of Mrs. B., as Dr. A. was attending Mrs. C. with puerperal erysipelas. Dr. Stedman was called upon

and delivered Mrs. B., and a few days after discovered that the nurse on duty came straight from the house and bedside of Mrs. C. Mrs. B. made a rapid and complete recovery, leaving Dr. A. to balance the account between his conscience and his pocket.

Pigmentary Deposit in Mammary Cicatrix. — Dr. Richardson, in reporting the case, alluded to the fact that, owing to the crowding together of the mammary ducts at the nipple, it is always deemed advisable to make the incision, in cases of mammary abscess, as far from the centre of the breast as possible, in order that the ducts may receive no unnecessary injury. The following case seemed to show another reason for the exercise of care in selecting the spot for the incision, and to indicate the necessity for avoiding the making of any cut across the border-line of the areola, lest, besides a needless wounding of the mammary ducts, an unsightly and irregular discoloration of the breast be produced.

K. S., twenty-five years of age, was confined with her second child in the Boston Lying-in Hospital, February 17, 1876. According to the patient's story she had been confined with her first child in New York, March 24, 1874. Some time after her delivery in that city she "took cold," and had a large mammary abscess in the right breast. A small incision was made at the upper part of the areola, but the opening not being deemed sufficient, a second cut was made two days later, at the lower edge of the areola. The first incision lay almost entirely within the areola, while the second, starting from a point about half an inch within, ran to a corresponding distance without the line of the circumference. An examination of the breast showed a very curious deposit of pigment, as affected by the location of the incision. At the upper part, where the cut scarcely passed beyond the line, a slight waving only in the regularity of the line was produced; but below, a deposit of pigment had taken place, which entirely surrounded the cicatrix of the lower incision, thus forming a prolongation of the areola at that point, measuring over half an inch in length and nearly that distance in breadth. The result was a very marked disfigurement of the breast, which it would seem advisable to avoid in operations of this kind. In case an abscess pointed along the line of the areola, a subcutaneous opening, made from a point below, which, while it gave a free exit to the pus, would avoid wounding the line of pigmentary deposit, would promise better results.



Dyspareunia. — Dr. Forster, referring to the discussion on the subject at the previous meeting, mentioned a case in which the distress was occasioned by a spot of herpetic eruption as big as the little finger nail, situated at one side of the fossa navicularis. This was cured in a few days, and all trouble ceased.

Dr. Hodgdon related the case of a young woman, married one year, whom he delivered by forceps after a tedious labor. She made an ordinarily good recovery. A few days before, and on one other occasion only, she had excessive pain in the region of both ovaries, lasting several hours, following sexual intercourse. She never experienced pleasure in the sexual act, and never knew what sexual desire was, before or since her marriage. Nothing abnormal was observed at the time of labor.

Dr. Minot said that he had seen two or three such cases, as in the instance of a lady who had borne two children. In her case there was an entire absence of desire or pleasure, but she did not have the ovarian pain as in the case just reported. Dr. Minot called attention to the remarkable fact that such women conceive as readily as any others.

Dr. Chadwick related a case in which there was for years a total absence of sexual feeling, until the birth of twins, ten years ago. Since then there has been the most frightful nymphomania. The patient has severe neuralgia, erotic dreams at night, spasms, and headaches, which are much relieved by intercourse, which occurs about once in two weeks. Bromide of potash was given with some effect in reducing the dreams and headaches, and phosphorus was administered with very much the same effect, but in neither case was the relief perfect or permanent.

Dr. Read suggested the use of lupulin. Several years ago he employed this remedy in a case of masturbation in an old lady, with very satisfactory effect. There was no disposition to keep up the habit, but on the contrary a good deal of solicitude manifested as to what change could have taken place in her feelings. The dose was ten grains administered in beer, of which the patient was very fond.

Dr. Chadwick mentioned the case of a married woman who experienced the natural sexual feelings until about six months before, when sexual intercourse became entirely distasteful to her, but at the same time she became subject to erotic dreams, from which she would wake up and find herself masturbating. She was not lacking in affection for her husband, and has continued to have intercourse as often as usual.

Dr. Sinclair said that he had a patient, a lady aged twenty-four, who, as in the case just mentioned, had no pleasure whatever in the sexual act, but who masturbates regularly. Of late she has gone eight or ten days without indulging in the habit.

THE MEDICAL MEN OF THE REVOLUTION.

If, as we hope, our readers have not forgotten our centennial number of June 17, 1875, they may remember that we had announced for it a paper with the above title by Dr. J. M. Toner, of Washington, which the indisposition of the author prevented his completing. What was our loss has been the gain of the Jefferson Medical College, for Dr. Toner continued his work and made it public in an address before the alumni delivered on March 11, 1876. He gives

an interesting account of the struggles of the medical department of the continental army and a short biographical sketch of many of the surgeons. A list of nearly twelve hundred names of medical men who took more or less part in the contest, appended to the address, shows the thoroughness of Dr. Toner's research. We had no idea that half that number of men, with any claim to be called medical, could be found at that time in the country, but Dr. Toner estimates that there were three thousand five hundred. The profession has reason to be proud of the part played by our predecessors. Their services began with the first skirmish. Dr. Samuel Prescott gave the alarm that on the 19th of April, 1775, the British troops were to march on Concord. The names of nine physicians who took part in the fight in military or medical capacity have been preserved. Among them was Dr. Joseph Warren, the president of the Provincial Congress of Massachusetts, who fell, two months later, at Bunker Hill. It was about the time of the latter engagement that hospitals were first established. As may be imagined, great confusion existed, and the want of system was much felt. Jealousy between hospital and regimental surgeons appears to have run high. On the 27th of July Dr. Church was made director of the hospital near Boston, but his career was brief and melancholy, for three months later a court-martial found him guilty of holding criminal correspondence with the enemy. As he was simply expelled, there is reason to hope that he cannot have intended absolute treachery. Dr. Morgan, who succeeded Dr. Church, did good service, but apparently had a stormy administration, owing to the dissensions that were constantly occurring. In April, 1776, he removed the hospital to New York; early in 1777 he was removed himself, apparently without cause. We cannot follow Dr. Toner through his interesting sketch for want of room, but everywhere we see the same enthusiasm and skill, followed too frequently by jealousy and intrigue. The medical department no doubt served as a scapegoat for numberless offenses, or rather deficiencies, which the nature of the country and the army rendered inevitable. As we look back at those times, it is with wonder that so much was done and so well done, not with disappointment that a raw country did not have well-appointed ambulances. As to the diseases, typhoid, dysentery, and diarrhœa appear to have been the chief scourges, though there was much small-pox, which was kept alive by inoculation. As to the acquirements and standing of the mass of the surgeons but little is known, though we are sure that many occupied the highest rank in the community. Dr. Toner finds that over one hundred had obtained academical degrees at home or abroad. Of these, twenty-four came from Harvard, first then as now, twenty-one from Princeton, and three from Yale.

MEDICAL NOTES.

— The Boston Medical Library has just received from Dr. J. N. Borland the gift of his medical library, numbering over two hundred volumes of the most valuable recent text-books and standard works. It is to be hoped that the very satisfactory condition of the library as shown in the first annual re-

port, which we published last week, will induce other members of the profession to deposit in this library, either as a gift or as a loan, such books, journals, or pamphlets as they no longer have occasion to use at home. It is desirable that physicians in the city and suburbs who feel inclined to contribute toward the support of this institution should enroll themselves as members of the association.

— Cinchona cultivation is reported to be very successful in India. In Sikkim there are now nearly three millions of trees in growth, mostly of the red variety, yielding a large quantity of the alkaloid. In the Neilgherry hills there are some three thousand acres under cultivation. In British Birmah the cultivation of the bark is also carried on with success.

— A new medical tax is announced from the Bureau of Medical Affairs in Berlin, of which the following are points: for a distance of two kilometres, or less, carriage fare and time cannot be charged (a kilo. is about three fifths of an English mile); for a distance of more than two kilos, carriage fare may be reckoned; night visits are those made between ten P. M. and seven A. M.; the amount of a single fee may depend upon the station in life, also upon the ability of the patient to pay and the severity of the case. The charge for the first visit at a patient's house is from two to six marks (a mark represents twenty-five cents of American specie); for every succeeding visit, one to three marks; for a night visit, six to eighteen marks; for an office visit, one to three, and for an office visit at night, three to nine marks.

BOSTON CITY HOSPITAL.

MEDICAL CASES OF DR. F. W. DRAPER.

REPORTED BY C. W. BROWN, M. D.

Ulceration of Large Intestine complicated with Renal Disease. — Julia S., aged thirty-seven years, born in Ireland, entered the hospital June 28, 1876. During the previous six months she had been somewhat debilitated, but was always able to perform her duties. Ten days before her entrance she had two chills, and one on each of the three following days; there was also vomiting, with anorexia, diarrhœa, and sharp pain in the region of the left nipple, increased by full inspiration; there was slight cough without expectoration. The diarrhœa persisted until two days before the patient's entrance to the hospital.

At entrance the pain was not severe. The patient complained chiefly of weakness and poor appetite. The tongue was moist and covered with whitish coat. The pulse was weak, 80 per minute; the temperature was 98.1°.

July 1st. Twenty drops of the tincture of the chloride of iron were prescribed, to be given three times a day. The patient did not complain of pain; slept much without opiates, and was very listless. Appetite poor.

July 7th. Condition nearly the same as at last report. No recurrence of diarrhœa. Discharged at own request.

July 22d. Reëntered. Since her discharge the patient has vomited more or less steadily and has had a severe persistent diarrhœa; no tenesmus. The

dejections do not contain blood. There is some vertigo, with slight pain in the back and epigastrium. Patient is very weak; appetite poor; much thirst. Tongue moist and clean. Skin moist. Temperature 98.4°. Pulse small, feeble, 96.

July 23d. Diarrhœa continues; dejections yellowish and watery; no blood. Patient has vomited twice since entrance. Diet of milk and lime-water, and ten grains of subnitrate of bismuth every two hours.

July 24th. Vomiting checked. Diarrhœa continues; dejections involuntary, and of the same character as before. Patient inclined to stupor. No pain. Pulse very weak. Omit bismuth; sherry wine was ordered, four ounces per day as wine whey, also beef-tea two ounces every two hours.

℞ Pulv. opii . . . . . gr. i.
Cupri sulphatis . . . . . gr. ½. M.
Every three hours in pill.

July 25th. Dejections more numerous and continue involuntary. The patient sank rapidly and died.

Autopsy, by Dr. W. P. Bolles, four hours after death. There were old adhesions in both pleuræ. The heart was rather soft, its valves perfect. The liver was small, — weight, two and one half pounds, — considerably indurated by increase of its interstitial tissue, and somewhat granular. The left kidney was contracted, gray, and very much degenerated; its capsule thoroughly adherent to the organ as well as to the surrounding fat. At one end was a large cicatricial spot. The right kidney, also adherent to fat, was reduced to one half an ounce in weight; it was flat and shapeless, showing but very little renal substance upon section.

The mucous membrane of the small intestine was very thin, the valvulæ conniventes being few and small and apparently atrophied; that of the large intestine was swollen and soft, covered in places with exudation and riddled with ulcers of various sizes, mostly small and not extending into the muscular coat. Peyer's patches were not diseased. The head was not examined.

This case is interesting as showing the lesions of dysentery without any dysenteric symptoms. The dejections did not at any time contain blood or mucus, nor was there tenesmus. The persistent diarrhœa eliminated the water and urea which the degenerated kidneys could not excrete, and thus the intestinal lesions seemed to partially compensate for those of the kidney.

A patient recently died in the hospital, under the care of Dr. O. W. Doe, who presented similar symptoms during life and the same appearances upon post-mortem examination.

An article appeared in the *American Medical Times*,[1] by Dr. H. W. Cooke, upon the Diarrhœa of Soldiers, with an account of seventeen autopsies. The clinical history and record of post-mortem examinations bear a striking resemblance to the cases above mentioned. The chief symptoms were weakness and diarrhœa. The intestinal lesions were always in the large intestine, and most marked in the rectum. The kidneys were degenerated, in most cases showing the appearances of Bright's disease. The urine did not contain albumen, but showed renal casts in abundance.

[1] Vol. vi., page 102.

Gangrene of the Lung treated with Salicylic Acid. — O. M., forty-five years old, a well-developed laboring man, entered the hospital July 1, 1876. His health had always been good (with the exception of slight attacks of asthma) until the beginning of the previous month, when without known cause he was attacked with severe cough attended by copious expectoration of "blood and corruption" which had a very foul odor. He continued his daily work until one week before coming to the hospital, when he was attacked with a chill, followed by sudden increase of cough. The expectoration became more profuse. For a few days the sputa were nearly "half blood." He had sharp pains at the base of the chest on the left side; decubitus on the right side greatly increased the cough and expectoration. At the time of entering the hospital, the patient's sputa amounted to about two pints in twenty-four hours. He was quite weak, his appetite very poor, and his bowels constipated. Respiration 30, temperature 100.6°, pulse 90.

July 2d. Physical examination showed dullness on percussion over the left back, amounting to flatness at base. There was corresponding dullness in front. On auscultation, there were found sonorous and sibilant râles in the right back, most abundant at the base. In the left back, about the angle of the scapula, respiration was bronchial over a space of the size of the hand, with coarse and fine mucous râles and a peculiar gurgling as of air drawn through a dilated tube filled with thick fluid. At the left base in front, were subcrepitant râles. The sputa were abundant, dark in color, and purulent, having a well-marked gangrenous odor. Salicylic acid was prescribed, ten grains three times a day. Pulse 108, temperature 102.2°.

July 9th. Cough troublesome at night. A drachm of the syrup of poppies was ordered at night and one grain of sulphate of quinia three times a day. The expectoration has become less abundant and the sputa are less offensive. The temperature has fallen steadily until it has now reached the normal point. Salicylic acid was omitted, and the offensiveness of the sputa fully reappeared within forty-eight hours.

July 11th the patient had ten grains of salicylic acid every two hours; this soon rendered the sputa nearly inodorous. The patient did well until the 16th, with the exception of an attack of hæmoptysis, which was controlled by ergot. On the 16th hæmoptysis recurred with increased severity, and gallic acid, five grains every hour, was given. Examination showed dullness on percussion throughout the left back, above the angle of the scapula, flatness below. Resonance was normal in the left front. Respiration was obscure in the left back. There was sharp pain in the left side of the chest.

July 18th, the hæmoptysis having ceased, gallic acid was omitted. The sputa were abundant, purulent, and entirely free from gangrenous odor. The patient received two pints of ale per day. Hæmoptysis recurred on July 23d, and was again controlled by gallic acid.

July 27th. Cavernous respiration is heard at and outside the angle of the left scapula. There is a distinct sinking in of chest-wall throughout the left scapular region. The general condition is much improved; appetite good.

August 3d. Salicylic acid was omitted, the sputa being entirely without gangrenous odor.

August 9th. Fewer râles in the affected region; cavernous respiration with pectoriloquy, just below the angle of the left scapula; cough and expectoration diminishing; sputa becoming mucous in character.

August 17th. The left lower lobe is still dull on percussion, but cavernous respiration has given place to bronchial, with a few fine mucous râles in the same region. The sputa are mucous. Nutrition excellent.

August 22d. Bronchial respiration has nearly disappeared. A few subcrepitant râles remain. The chest-wall in left scapular region is more depressed. The appetite is excellent. The general condition continues satisfactory. Discharged.

This case is of special interest because of the apparent action of salicylic acid. At the time of the patient's entrance, so far as physical examination enabled one to judge, the left lung was considerably affected with gangrene. Under the use of salicylic acid the disease, instead of advancing, was confined to parts already attacked. When but thirty grains of the acid were given daily, the sputa became less offensive and the quantity was much diminished. That this was not accidental was shown by the fact that the odor fully returned and the quantity increased when the acid was temporarily omitted. When the acid was given in larger doses than ten grains three times daily, the sputa lost their gangrenous odor and appearance. These changes were particularly manifest and agreeable to the patient himself.

LETTER FROM LONDON.

Messrs. Editors, — Scarcely arrived in London, it may be imagined with what pleasure I availed myself of Mr. Spencer Wells's kind invitation to be present with Dr. Greenhalgh of St. Bartholomew's, Dr. Paky of Pesth, Dr. Osterloh of Dresden (whom I had repeatedly met at places of gynæcological interest in Edinburgh), Dr. Willard of Washington Territory, and five other gentlemen, at his seven hundred and ninety-fifth operation for ovariotomy. The opportunity was one to which I had been looking forward for many years. It had been my good fortune to see somewhat of Mr. Wells during his visit to America. I had tried to keep the run, so to speak, of his several series of published cases, and had frequently been favored with verbal reports of his methods of procedure from professional friends who had seen him operate at the Samaritan, so that when I came myself to be present, it was with the feeling that while I should undoubtedly find much to admire there could be little of novelty, and little with which, at least by description, I was not already familiar. In this, however, I must acknowledge that I was greatly mistaken. I cannot do better than give briefly a description of to-day's operation, and then state consecutively the points of interest that most forcibly struck me, in the belief that they may furnish valuable hints to some of our operators at home.

(1.) Those invited to attend were requested to sign a certificate that they had not been present within seven days at a post-mortem examination, visited a dissecting-room, or treated a case of contagious disease.

(2.) They were then, punctually at the moment appointed, taken to an up-

per chamber, with bright, open exposure to the southwest, where Mr. Wells stood in readiness for his patient, who was already anæsthetized.

(3.) Bichloride of methylene was the agent administered, or rather air charged with methylene by means of a caoutchouc pump.

(4.) The lower extremities were confined by a band across them; the upper ones by a strap to each wrist, the arm being brought down beneath the table and fastened to one of its supports.

(5.) The abdomen was covered by a thin rubber sheet, with a circular opening adapted to the possible length of the incision. Beneath the table, to catch the fluid contents of the cyst, or anything which might drip, was an ordinary metallic hip-bath tub. Under the edge of the table, fastened so as to be within immediate reach of the operator, hung Mr. Wells's large spring-trocar, with a long curved arm, to which was attached a rubber tube of great calibre, communicating with the tub beneath.

(6.) None of the bystanders were permitted to examine or otherwise touch the patient.

(7.) The incision was short, low down, occupying but a portion of the umbilico-pubic interval, and was completed upon a director of peculiar form, broad towards its rounded extremity. There were extensive adhesions, which were broken down by the hand with tolerable ease; moderate hæmorrhage occurred from their site, and from vessels in the line of incision; the cyst was multilocular, one of its cells containing a large amount of turbid fluid. Through the trocar-opening, sufficiently enlarged, Mr. Wells passed his hand and broke down such of the adjoining septa as would thus yield. The mass having then been readily delivered, a stout, slightly curved steel clamp was attached to the pedicle, and on severing this the first stage of the operation was completed in ten minutes from the first stroke of the knife.

(8.) The other ovary, though still small, proving cystic, was also removed, the base being transfixed by a double silk thread tied on each side.

(9.) All coagula having been carefully removed from the peritoneal surface and pelvic cavity, the clamp was adjusted crosswise externally and the wound was closed by seven stitches, the pedicle emerging between the last and the last but one. These sutures, like the ligature already described, were of Chinese silk, uncarbolized. They were passed through both the integument and the peritoneum, without, however, taking up the whole thickness of the abdominal wall, and during their tying the loose pouch of the abdomen was bunched up, as it were, by the hand of an assistant. The threads were provided with a needle at each extremity, the second of which was held by the operator's lips while the first was being passed, thus preventing twisting and other entanglement and permitting greater speed.

(10.) The wound having been closed, bits of lymph were carefully placed under the clamp and between the sutures; the extremity of the pedicle outside the clamp was touched with solid perchloride of iron; the abdomen was covered with cotton-wool, over which were strapped broad bands of adhesive plaster; a binder of flannel was placed outside this, and the entire operation was completed in just half an hour from its commencement.

Nothing could have exceeded the adroitness and celerity, yet absolute thoroughness and perfect neatness of the whole procedure. There were two fe-

male nurses and two assistant surgeons, besides the gentleman in charge of the anæsthetic. They were all constantly occupied, and each, knowing exactly what to do, at what moment, and how, never came for a moment into the others' way, so that there were six busy pairs of hands, every one at its especial work. The operation, from beginning to end, was as if done by the most perfect yet sentient mechanism, and was an apt illustration of the consummate skill that only such unequaled practical experience as that of Mr. Wells could produce.

To the casual observer it might have seemed, so quietly, rapidly, and steadily was everything done, that Mr. Wells's dexterity, as I have indeed heard declared, was but the result of the constant repetition of a seemingly simple procedure, and that his extraordinary proportion of recoveries, unapproached save by Dr. Thomas Keith, of Edinburgh, was an instance of sheer good fortune alone. Those of real experience in such matters think far otherwise. One glance at this operator fairly in action, utterly carried away as he is by his work, his eyes sparkling and fixed, yet taking in as it were the whole patient, is sufficient to convince one that he is ready for every possible emergency, and that the great impression is not so much of what one actually sees as of the invisible power held in reserve and available at a second's notice for the time of need.

As to Mr. Wells's percentage of recoveries, in no wise, I believe, depending upon chance, there is even more to be said. I may hereafter, in another communication, refer to the general subject, having, as is tolerably well known at home, decided views of my own as to the essential points in ovariotomy, so that I will just now confine myself to what was shown at the operation of today. There are many questions of interest, as, for instance, whether ovariotomy succeeds better with American or English patients, for the races differ greatly as regards nervous excitability, tolerance of shock, etc., but then it must be remembered that Mr. Wells's successive series now represent patients from almost every part of the globe; and as to whether operators are more fortunate in city or in country air. The great bulk of Mr. Wells's sections are made in the very heart of crowded London. What, then, are his secrets? To discover some of them we have but to glance again at what I have just written.

(1.) He permits no inoculation with septicæmia by the visitors who are present, no matter if they be intimate friends. They cannot touch the patient's person, much less her mucous membrane by a vaginal examination; and by their written certificate they are put upon their honor that they have not within a week been even within a suspicious atmosphere.

(2.) Similarly, precautions are taken against the chance induction of simple peritonitis. By permitting no examination, whether external or internal, by visitors, a deal of unnecessary stirring up of the patient's pelvic and abdominal viscera is avoided. At such times it is but a sorry compliment to a professional friend to ask him to verify the diagnosis, while abstinence from such manipulation may to the patient make the difference between life and death.

(3.) The patient, having been anæsthetized previous to their entrance, sees no stranger. Visitors would instinctively retire at the close of an operation,

but they are too often ushered into the room prematurely, thus causing much unnecessary nervous excitement, which most certainly cannot increase the chance of recovery.

(4.) Celerity in this operation, provided time enough be allowed for the completion of every requisite stage, and the closure of all points of hæmorrhage, means not *éclat* for the operator so much as safety for the patient, by preventing undue exposure of her viscera and peritoneum to atmospheric irritation and chill. To insure this, skilled assistants are required, who are not only generally, but specially, versed in every possible detail of the operation.

(5.) Every minute precaution, if wise, counts towards the result; so that to confine the patient's extremities beforehand leaves the assistants free for other duties and preserves the operator from stoppage in his work; saves his mind from annoyance and his thoughts from being turned from the point of the moment. In the same way perfect neatness and cleanliness, everything being in its place, and that place a matter not of chance but of prevision, helps the result. Napkins soaked with ascitic and ovarian fluid, sticky sponges, puddles of coagula, and instruments coated with half-dried blood may seem the necessary adjuncts of such an operation, but their absence goes far to keep the operator's hands facile, his mind cheerful, his speed great, and to cause his whole work to be better done.

(6.) Other things being equal, the shorter the incision the better, for manifold reasons. To disintegrate the morbid mass from within its substance by the hand passed into the cavity of a cyst is far more judicious than to pull and to twist and otherwise forcibly undertake to deliver it, whether by hand, by forceps, or by both combined. The adjacent viscera are less disturbed in position and less liable to be bruised, the peritoneum receives infinitely greater protection, and there is less traction upon the pelvic ligaments.

To the other steps of the operation I need not refer, covering as they do ground that is now much more common to surgeons. I used myself to attach great importance to passing the sutures through the peritoneum, as Mr. Wells did in the case now reported, but I have had recoveries when, to decide this question, no suture whatever was used; either the external lips of the wound were simply brought together by adhesive straps, or its internal edges by deep outside pressure of a similar character. And so with regard to the treatment of the pedicle. In this instance it was brought outside, and a styptic antiseptant applied. Recoveries have so constantly followed not merely this method, especially known as Mr. Wells's, but deep tying, whether with silk, catgut, or wire, deep acupressure, the actual cautery, and even other procedures, the comparative merits of which have not been decided, and of which one seems best on one occasion and another on another, that I do not now discuss them. My aim has been to point out certain general principles, hardly as yet appreciated, which must underlie all constant success; and I am quite sure that in Boston, where the performance of this operation of ovariotomy, perhaps *the* great triumph of modern surgery, was, not many years ago, in Mr. Wells's own presence, pronounced "a mere matter of taste," my remarks will be appreciated and their justness coincided in.

49 South Street, Park Lane, W., London, *October* 4, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING NOVEMBER 4, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244			29.35
Philadelphia	825,594	310	19.52	22.24
Brooklyn .	506,233	179	18.41	24.92
Chicago . .	420,000	164	20.30	19.75
Boston . .	352,758	131	19.31	26 20
Providence	101,500	46	23.56	19.02
Worcester .	51,087	22	22.39	20.91
Lowell . .	51,639	33	33.23	20 55
Cambridge	49,670	7	7.33	23.31
Fall River	50,372	15	15.48	23.99
Lawrence .	36,240	10	14.35	25.96
Lynn . .	33,548	14	21.70	19.23
Springfield	32,000	9	14.62	20.93
Salem . .	26,344	13	25.61	22 92

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS, — In your notice of the graduating exercises at Dartmouth have you not given too free a construction of the Hippocratic oath as regards the duty of medical instruction without fee? Is it not limited to the sons of our preceptor in medicine? "Præceptorem artis medicæ loco parentum habebo. Pro fratribus erunt mihi posteri ejus; eamque artem illos, ubi voluerint, edocebo, absque mercede vel præsenti, vel ad tempus ad scripta."

W.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held on Monday evening next, at its rooms, 36 Temple Place, at eight o'clock. Dr. Fifield will read a paper on Acute Cystitis.

BOOKS AND PAMPHLETS RECEIVED. — Principles of Human Physiology. By William B. Carpenter, M. D., F. R. S. A new American from the Eighth revised and enlarged English Edition. Philadelphia: Henry C. Lea. 1876.

Epitome of Skin Diseases, with Formulæ. By Tilbury Fox, M. D. Philadelphia: Henry C. Lea. 1876. (Both of the above for sale by A. Williams & Co.)

Diseases of the Nose and its Accessory Cavities. By W. Spencer Watson, F. R. C. S. Philadelphia: Henry C. Lea. 1876.

Transactions of the Medical Society of Pennsylvania. Vol. xi. Part 1. Philadelphia. 1876.

Twenty-Fifth Annual Report of the Boston Provident Association. Boston. 1876.

Deirdrè. Boston: Roberts Brothers. 1876.

Recherches expérimentales sur le Rôle physiologique et thérapeutique de la Pancréatine. Par Th. Defresne. Paris: A. Delahaye.

The Theory and Practice of Medicine. By John Syer Bristowe, M. D. Lond., F. R. C. P. Edited, with Notes, by James H. Hutchinson, M. D. Philadelphia: Henry C. Lea. 1876. (For sale by A. Williams & Co.)

Transactions of the New Hampshire Medical Society. Eighty-sixth Anniversary, held at Concord, June 20 and 21, 1876.

A Lecture on Specialism in Medicine. By E. D. Forée, M. D., Professor of Diseases peculiar to Women in the Medical Department, Central University, Louisville, Ky. (Reprinted from The American Practitioner, November, 1876.)

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THE BOSTON
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A CASE OF INTESTINAL OBSTRUCTION OF EIGHTEEN WEEKS' DURATION, WITH REMARKS.[1]

BY JOHN G. BLAKE, M. D.

THE subject of this report was a man forty-six years of age, Irish by birth and a builder by occupation, who was accustomed to spend most of his time in the open air. His habits, partly necessitated by his business, were active but not laborious. He came to this country during his minority, and was for several years engaged in constructing railroad bridges, erecting churches, etc., in the Southern States. He had intermittent fever, but no diarrhœa or any other disease peculiar to the climate. For the last fifteen years he had lived most of the time in the New England States, and for the last ten, with the exception of one year in Pittsfield, in Boston. He had been temperate in the use of alcohol, but not so moderate with tobacco, which he used at times, and for considerable periods, very freely both by chewing and by smoking. His health during the last ten years was uniformly good, except during his residence in Pittsfield, a year and a half before the beginning of his last illness. For three months, during that time, he was confined to his bed with what he called congestion of the lungs and liver, probably pneumonia, with some hepatic complication. He fully recovered, however, and was in perfect health the following summer, as I can testify from personal observation. I was his physician through the entire time of his residence in Boston, and do not recall ever being asked to prescribe for anything more serious than a cold, catarrh, indigestion from imprudence in diet, slight constipation, and the condition usually described as "biliousness," which in the majority of cases means commencing dyspepsia.

Last November the patient returned to Boston, and was perhaps less actively engaged than for many years before. Added to this was anxiety on account of business transactions, which created a good deal of mental excitement and did not improve his digestion. He became unduly solicitous about the condition of his bowels, which naturally would have acted every second day at farthest, and if twenty-four hours elapsed without a movement he would take a cathartic of some sort, —

[1] Read before the Boston Society for Medical Observation, October 2, 1876.

pills, Seidlitz powders, citrate of magnesia, or castor-oil. He suffered also from flatulence.

On the 29th of February I was sent for and found him in bed. I learned that, his bowels not having acted to his satisfaction, he had taken Epsom salts, Rochelle powders, castor-oil, and pills, but without obtaining fæcal evacuations. The stools consisted of glairy mucus, not unlike white of egg, mixed with blood, and were attended with great forcing efforts on his part, accompanied by severe pain. He did not perceive any sudden increase of pain or nervous shock, or sense of anything giving way while the cathartics were acting.

A careful examination of the abdomen failed to discover any tumor, or marked pain or tenderness on pressure at any point. There was a sense of soreness about the lower part of the abdomen, and a slight degree of tenderness on deep pressure in the umbilical region, but nothing more than the straining efforts at stool would occasion. The other organs were perfectly healthy, and his appearance at this time was that of a strongly-developed, vigorous man in the prime of life and weighing one hundred and eighty pounds. He was quite free from pain, with a pulse of 72, seemingly well, and only anxious about the action of his bowels.

No change took place in the patient's condition during the next week; then he began to be troubled with tympanites, which, together with vomiting, became his most distressing symptoms. Hiccough also appeared about the end of the second week, and continued until the tympanites was relieved. As time elapsed he began to emaciate, and continued slowly but surely to lose strength and flesh, until toward the close he was literally a living skeleton. Not a particle of fat remained; the muscles were atrophied and the bones almost protruded.

On the morning of June 27th the bowels moved spontaneously, and during the succeeding twenty-four hours the patient had an evacuation of a tarry-looking matter every hour, the quantity, estimated as accurately as possible, being about a gallon. He was quite conscious of the movements, but had no power to control them. On the two following days the number of operations and the amount diminished considerably, and on the fourth, fifth, and sixth days they did not exceed six daily, or four ounces in quantity at any one time. He continued to take nourishment in moderate quantities, notwithstanding an increasing ulceration of the mouth resembling cancrum oris, of which he had made but slight complaint previously. On the seventh day he suffered from the heat, appeared more feeble than at any previous time, declined nourishment, and could swallow only with excessive pain. At noon his bowels began to move frequently, and within an hour he had six loose discharges, more natural in color, but thinner, than any previous ones. These weakened him much, and as he still refused food it was evident

that the end was at hand. He rested fairly through the night, but sank away next morning, and died at ten o'clock, July 4th, nineteen weeks from the beginning of his illness.

For the week preceding the movement of his bowels, hiccough again appeared, and continued day and night with but very short intervals of rest. German wine was the only thing found to affect it favorably, and that but very slightly. The urine continued natural in appearance and free in quantity throughout, influenced a good deal, no doubt, by the liquid character of the nourishment.

Since his death it has been ascertained that on the Sunday preceding his illness he partook freely of oranges, and swallowed some of the seeds. His daughter was positive that after the bowels moved she detected them, quite black, in the stools. No autopsy was allowed.

Treatment. — When first seen, enemata were freely used. A calomel pill every two hours, followed by castor-oil and lemon-juice, repeated several times, and morphine to relieve pain, were given. On the fifth day of his illness the bowels had become swollen. Dr. Cheever being called in consultation, a rectal tube was passed high up, and copious enemata were given of oil of turpentine, castor-oil, and a gallon of warm water. Great relief to the swelling was experienced and continued four days, when the injection was repeated without producing any result. On the tenth day the tympanitic distention was enormous, and the patient was in imminent danger of death; the liver was pushed as high as the nipple, and the heart pulsations appeared between the second and third ribs. An attempt at inflation was made by Dr. Ellis, but without affording relief. The patient's condition was exceedingly critical at this time, and finally, two weeks from the beginning of his illness, recourse was had to aspiration.

The smallest needle of a Potain's aspirator was pushed through the abdominal parietes, an inch above the umbilicus, into the distended intestine, and the flatus pumped off precisely as fluid would be. In less than five minutes the tense condition entirely disappeared, and space was afforded the compressed lungs to expand. The pulse soon fell from 140 to 96, and the improvement in the patient's condition and feeling was wonderful. At this time, on consultation, it was thought best to make a mild attempt to procure a movement, in view of the fact that no positive indication of inflammation or mechanical obstruction could be detected. A tablespoonful of infusion of senna, with aromatics to neutralize the well-known griping tendency of that cathartic, was ordered every hour for twelve hours, opiates being withheld during that time. After half a dozen doses the stomach became irritable, the bowels began to roll and gripe, and the attempt was abandoned, morphine being again resumed.

Three days after, citrate of magnesia was given in small, frequently re-

peated doses, but the result was the same, and these were the last endeavors to obtain a movement by aperients. The administration of morphine was continued in quantities sufficient to keep the bowels quiet, and when distention became distressing the aspirator was used. After the first relief it was not again required for three days; gradually the period grew shorter, and towards the end it was often imperatively called for three and four times in twenty-four hours. It never failed to give decided, if not complete relief. During the sixteen weeks it was used one hundred and fifty times. The needle was introduced wherever a coil of distended intestine could be made out, and when that was emptied another prominent point was selected, until the abdomen became quite flat. During the earlier weeks, one introduction and careful manipulation of the needle, with frequent cleansing from liquid intestinal contents, was sufficient, but during the latter part of the time it was often found necessary to introduce it three or four times during a visit, in order to obtain complete relief. Several times a larger needle was employed, and through it the intestinal contents were repeatedly withdrawn to the amount of half a pint. Over a quart of dark, tarry-looking fluid was removed in this way.

No sign of general peritonitis followed the repeated punctures. There was perhaps a little local tenderness and possibly adhesion of the intestine to the abdominal parietes at the point most frequently selected, which was just above the umbilicus and in the median line. When a larger needle was employed, local anæsthesia was often produced by ether spray, or ice and salt. Abdominal distention caused distress in breathing, pain, high temperature, and rapid pulse. The use of the aspirator relieved all these and restored a condition of ease and comfort. Opium contributed to the relief of pain, but was powerless of itself to prevent or relieve the tympanites.

On May 8th Dr. Morrill Wyman saw the case in consultation with Dr. Bigelow and the writer, and performed the operation of inflating the bowels. It was done very carefully and thoroughly, but failed to afford relief. Three weeks after, it was again resorted to, the bowels being first completely freed of flatus. Various sorts of bellows were tried, and the air was passed high up into the intestine through a long tube. The operation was continued until Dr. Wyman was satisfied with its thoroughness, but no desired effect followed. The operation was painless, and the feeling of distention that followed was not more severe than the patient often experienced when needing the aspirator. Of course the distention could be only partial and confined to the part of the bowel below the obstruction. It lasted but a few moments; indeed, it seemed impossible to prevent the air escaping almost immediately after introducing it.

These were the only attempts made to relieve the difficulty by operative measures.

The patient was nourished throughout by a diet consisting of beef-juice, champagne, brandy, strained farinaceous gruels, nutritive enemata, minced fresh beef, and pancreas from a recently killed pig. These last mixed in nearly equal proportions in the shape of a soft sausage and placed in the rectum resulted in a partial digestion and absorption of the meat, and a sense of satisfaction to the patient's hunger. How much this sensation was real and how much imaginary I cannot say. Of course the object kept in view in the matter of diet was to obtain the maximum of nutriment with the minimum of residuum, and to get as much nourishment as possible into the system without loading the intestine above the obstructed point. What we needed to keep him alive was sufficient absorbing surface, and when this failed he died. The progressive emaciation showed that we were not able to supply the natural waste, and as the balance against us was constantly increasing, the end could only be death by starvation.

Twice a week on an average the patient vomited freely bile, gastric juice, and such drink as he had taken for some hours before. He always felt better after these attacks, and could take nourishment with more relish. A bottle of very dry champagne, from half a pint to a pint of beef-juice, a little meal-tea, and one or two injections, made up the average of nourishment daily when he was feeling comfortable. Half a pint of old brandy was substituted for the wine when he desired a change. Various sorts of stimulants were resorted to as variety became imperative, and among the most pleasant to him was German wine, which he thought occasionally relieved the distressing hiccough.

The amount of opium was increased from a quarter of a grain of morphine, three times a day, at first, to twelve grains daily during the last weeks of his life. Earlier, it was given by the mouth, but afterwards subcutaneously.

The temperature seldom varied from 98°. When the patient suffered from distention and pain it increased a couple of degrees, but rarely went above 101°. The average pulse was 80. Distention would also send this at times to 140, but when that was relieved the pulse receded again to its average rate.

With regard to the question of diagnosis, so much could be said and so little known with certainty that I will glance at it very briefly. The previous history might with a reasonable degree of certainty exclude stricture and tumor, and the mild character of the symptoms, namely, the absence of shock, of severe constitutional symptoms, and of stercoraceous vomiting, would be thought sufficient to indicate the absence of an internal hernia. Intussusception was for a time thought of, and a twist or adhesion of two coils of intestine from a circumscribed peritonitis was considered possible. No definite diagnosis was or could be

made beyond the fact that the difficulty was not in the large intestine; of that we felt sure.

Remarks. — This case was remarkable from its duration. It is believed to be the longest of its kind on record. The journals contain occasional reports of persons living three or four months without having an evacuation, and in one case (that of Milton Brooks, reported in the *Chicago Medical Journal and Examiner* of May, 1876) it is stated that the patient went eight months without a movement of the bowels. Such, however, were preceded by a constipated habit constantly increasing, the system gradually adapting itself, and life becoming possible under circumstances that at first sight would seem incredible. The subject of this paper was seized without preparation or warning, and yet for eighteen weeks life was prolonged. There were two reasons for this result: first, the mild character, if it may be so termed, of the obstruction; and second, the use of the aspirator. The average of cases of bowel obstruction terminate fatally or otherwise in two weeks, and the longest known to the writer was that of a patient of Dr. Bowditch in the Boston City Hospital, who recovered after four weeks. Instances of recovery after six weeks' duration are also reported by gentlemen who saw this case in consultation. I have no hesitation in stating, and believe Dr. Ellis will indorse it, that my patient could not have survived many hours, if the distention had not been relieved, two weeks after his illness began. His life depended then and afterwards more on the use of the aspirator than on morphine, nourishment, and all the other treatment combined. Indeed, the point of scientific value in the case consists in the lesson it teaches of the importance of this instrument under similar conditions, without regard to cause. Its use was suggested by a case of like character seen with Dr. Cheever some years before. Here a fine trocar and canula were introduced repeatedly, and the size of the abdomen diminished somewhat, but not so completely as if a vacuum were created and powerful suction employed. I have tried the former method of treatment since, but it was not satisfactory. A small needle will also answer the purpose with the latter method, and a possible danger from larger ones is avoided.

It is not difficult to imagine cases where the result would be favorable if life could be prolonged, and the danger from tympanitic distention and the pain resulting therefrom avoided. The use of the aspirator, as in this case, will certainly accomplish these results.

The question of gastrotomy was considered and strongly urged by me after all reasonable hope of the bowels moving spontaneously had passed. My reasons were, that the operation had been successful in similar cases; that the history, so far as it could throw light on the reason of the obstruction, did not prohibit it or render relief impossible; that death was inevitable under existing circumstances, and that the question of a few

weeks of life should not outweigh the possibility of cure. Writers on this subject share these views, and recommend at least an exploratory operation.[1]

Drs. Cheever, Ellis, Hodges, Morrill Wyman, and Henry J. Bigelow saw the patient once or oftener, and during the last weeks Dr. Bigelow saw him twice a week in consultation.

The following note, embracing the important points of this case, has been received from Professor Bigelow: —

Dear Sir, — There are one or two points in the case of Mr. Treanor to which I hope you will give prominence for the benefit of other physicians. Here was a man with complete intestinal obstruction for eighteen weeks. Whether due to diverticulum, twist, or intussusception, it is of interest to know that it did at last spontaneously yield. The patient was kept alive by treatment until it did yield. It is impossible to say what an operation would have accomplished. But an operation would have been a dangerous one. I think that, on the whole, the chances of recovery from operation in a common case, the duration of which cannot be foreseen, would not be as great as the chances of a spontaneous relief of the obstruction; especially if the latter were treated by what may be fairly called the new method, employed and so far as I know first employed by you, in this instance. I refer to the systematic and daily use for months, sometimes twice in twenty-four hours, of the aspirator, to withdraw the imprisoned gas. The abdomen of this patient was at one part thus peppered with points like a surface affected with old scabies.

During the greater part of his illness, if a day elapsed without such interference, the abdomen became tympanitic and painful, the pulse rapid and small, the vomiting was increased, and indications of collapse showed that death was not far off. It was then curious to see the patient, who had learned from you how to find relief, call for the aspirator, select a prominent point, and insert the tube into his intestine, while one of the family pumped out the gas. It is no exaggeration to say that he was saved in this way many times from the death which patients with obstruction often, perhaps usually, encounter.

This is a new thing. Although the final and proximate cause of death was diarrhœa, its principal agent was simple starvation. The patient, once healthy and robust, retained a persistent appetite during most of his disease, and slowly wasted to a skeleton for the want of pervious intestine enough to nourish him. His abundant soups and stimulus were vomited every few days, inspissated and half digested, almost with the regularity of an alvine evacuation.

[1] Since writing the above I have seen reports of successful cases of gastrotomy by Drs. Hilton Fagge, Howse, and Jonathan Hutchinson in the British Medical Journal of January 1, and April 1, 1876, and a notice of a successful case after obstruction of thirty-nine days' duration, by Surgeon-Major Johnson, which the reporter had seen.

I know no case where the aspirator has been so freely used; but it should be distinctly stated that the tube employed was the smallest (of the diameter No. 1, *filière* Charrière, ⅓ of a millimetre.) The patient dreaded the tube next larger in size, 1⅓ millimetre, which was inserted a few times, producing pain and tenderness. It is a little difficult to keep so small a tube free, but it is uncertain how far a larger one would be innocuous. Indeed, a German writer has within the last year wholly condemned the use of the aspirator in the intestine because it produced in his hands fatal results. Yours truly,

HENRY J. BIGELOW.

AN UNUSUAL RECTO-VAGINAL FISTULA.

BY E. CHENERY, M. D.

THIS rather unusual case of rectal fistula, opening into the vagina, may be of some interest to others as it was to me, since I was obliged to treat it without being able to find any account of a similar case.

Miss S., twenty-eight, employed in a shop, had for some time been declining in health. She finally left work and came home to rest and try means for her restoration. Her symptoms were those of general debility, anæmia, and costiveness, to meet which she was advised to take an electuary of subcarbonate of iron and powdered Peruvian bark. It was hoped that the bark in this preparation would serve to overcome the habitual costiveness, as also the constipating effects of the iron. Contrary to expectation the mixture proved violently cathartic, attended with considerable irritation of the rectum and sharp pain and weight in the perinæum. Each dose being followed with like effects, but few doses were taken. The pain and irritation at the lower part of the bowel which had now begun did not fully cease. A small swelling soon made its appearance to the front and right of the anus, about an inch and a quarter from the anus and three quarters of an inch to the right of the perineal raphé. Following the bunch, a purulent and offensive discharge came on from the vagina, with occasional bubbles of air. In this condition she subsequently consulted me.

On making pressure on this tumor, which was somewhat larger than half a filbert, it was found that the matter escaped into the vagina and appeared at the vulva; and a speculum revealed the fact that the outlet was on the posterior wall of the vagina, about two inches within.

The case was regarded as a rectal fistula in which the sinus had come to the inner surface of the skin and, instead of perforating it, had burrowed upwards outside of the sphincter vaginæ, and made its exit through the vaginal wall of the recto-vaginal septum, traveling a long way to go a short distance.

It appeared to me that if I could introduce a fine flexible probe into the vaginal orifice of the fistulary sinus, and carefully work it down the serpentine tract to the interior of the swelling, I might then cause the end of it to impinge against the under surface of the skin, and be able to open down upon it and bring it through without disturbing the parts. After a little patience, by the aid of a fenestrated speculum I succeeded in doing this.

Being now practically rid of the vaginal portion of the canal, I had reduced the other half to a simple common fistula. The next step was to introduce another probe at the point where the first came out, find the sinus, and follow it round the sphincter ani to the bowel. This was easily done; and the part was divided in the usual way. The probe being taken from the vaginal part and the canal well irritated, the lower opening was plugged with a pellet of cotton, and the cut packed and dressed. The patient made a speedy and perfect recovery, suffering no damage from the operation.

RECENT PROGRESS IN OTOLOGY.[1]

BY J. ORNE GREEN, M. D.

Treatment of Otorrhœa. — Schwartze[2] replies to Politzer in the next number of the same journal and considers that the failures to relieve in certain cases of otorrhœa treated by the caustic solutions of silver is owing to a want of care in the selection of the time for repeating the cauterization. He considers that the application should be repeated as soon as the slough from the preceding cauterization has come away. If the interval between the applications is too long, no progress is made. He also now uses stronger solutions than formerly, but if a very strong application is indicated he prefers the mitigated solid stick (lapis mitigatus) to the saturated solution. The neutralization with a solution of common salt he still considers advisable from one unfortunate result which occurred to him years ago, and he also favors neutralization of any of the nitrate which has passed into the nose by salt-water injections into that cavity.

Exostoses in the External Meatus. — Aldinger[3] narrates a case of exostoses in both meatuses which gradually filled the passages and produced such inflammation as to require operation. Successful operations in such cases have been so rare that these are of special interest.

The patient, a healthy man thirty-six years old, was first seen with inspissated cerumen in one ear, which had caused deafness. On re-

[1] Concluded from page 585.

[2] Archiv für Ohrenheilkunde, vol. xi., No. 2.

[3] Archiv für Ohrenheilkunde, vol. xi., No. 2.

moval of the small mass it was found that the meatus was largely filled by an exostosis from the upper and posterior wall, which had formed without the patient's knowledge and without any previous disease of the ear. The removal of the cerumen restored the hearing to the normal standard. Examination of the opposite ear showed a similar exostosis.

Eight years after, it was found that the growth in the first ear had closed the passage to a mere slit, which frequently became obstructed from collections of cerumen, and in the course of a few months this slit closed up, shutting in a mass of cerumen between the exostosis and the drum-membrane. The hearing for the voice was completely lost, and the watch was only heard on pressing it against the ear. After this condition had continued for six months suppurative inflammation of the tympanum and meatus set in, and Professor Heinecke removed the growth by chiseling it off in small pieces, while the patient was under chloroform, till a tolerably large passage had been made to the drum-membrane. The reaction from the operation was slight; suppuration set in on the third day and on the fifth day quite a large splinter of bone came away, and again on the tenth day a still larger piece was removed by the forceps, leaving the meatus about one half its normal size. Examination now showed the drum-membrane in a granular condition, with a small perforation anteriorly. By local treatment this condition was relieved, and the perforation healed, giving a hearing of over three feet for the watch. The seat of the operation cicatrized, but for some months the cicatrix seemed to be again enlarging; eventually, however, the swelling diminished and the patient was left with a fair-sized meatus and perfect hearing.

Six months after the first ear healed the patient had a precisely similar attack of tympanic inflation in the other ear, which was found to be similarly closed by the growth of the exostosis, and after this inflammation had continued for two months the same operation was performed on that side. The result of the operation was equally favorable on this side, a fair meatus being formed, but the tympanum from the long-continued inflammation was more seriously diseased and a large polypus had formed in it, which required removal. Two months after the operation the tympanic inflammation had subsided, and the perforation of the membrane had healed, giving a hearing of thirty inches for the watch and an equally good hearing for the voice.

In regard to the method of operating, it is only said that narrow chisels were used, that they were applied directly to the base of the exostoses without previous incision of the skin, and that quite strong blows with the hammer were necessary. It was found to be impossible to see, and the operation was done chiefly by feeling.

Gout and syphilis, which have been considered by some authors to be the causes of these exostoses, were absent in this case.

The Yellow Spot at the End of the Manubrium. — In looking at the drum-membrane of a healthy ear by means of reflected light, the manubrium of the hammer is seen inserted in the membrane, running downwards and backwards from the upper edge of the tympanic ring and ending at about the centre of the membrane by what appears like and has been described as a spatula-shaped extremity. This spatula-shaped widening of the end of the manubrium appears of a decidedly yellowish color and looks like an opacity of the membrane at that spot. Politzer explained the appearance as an opacity caused by the radiating fibres of the membrane being here heaped upon each other, where they centred on the end of the manubrium, but Trautman [1] from his investigations is led to a different and more scientific explanation, which is also of practical value as it gives another method of determining the position of the hammer and of judging of the condition of the drum-membrane.

From a study of the shape of the hammer Trautman finds that the manubrium is divided into three edges and three imperfect surfaces. The outer of these edges, that towards the drum-membrane, runs from the short process downwards to near the end of the manubrium, when it bends first somewhat backwards and then forwards; the lower portion of this edge is sharp, the upper more blunt, and as the drum-membrane is attached only to this edge it follows that the attachment of the membrane is narrowest where the edge is sharpest, and this is a little above the spot where the well-known yellow spot is seen. As this edge approaches the very end of the manubrium it divides into two arms, a half-millimetre apart. In the same manner an anterior and a posterior edge can be distinguished, forming three surfaces: an anterior towards the anterior segment of the drum-membrane, an upper or inner towards the promontory, and a posterior towards the posterior segment of the membrane. The anterior lies in its lower third, at an angle of about forty-five degrees with the anterior segment of the drum-membrane, being twisted on the long axis of the hammer, and consequently faces somewhat outwards. Bearing in mind now the angles at which the drum-membrane lies to the axis of the meatus, it will be found that this angle of forty-five degrees at which the anterior surface at its lower third projects from the drum-membrane explains the appearance of the yellow spot seen on inspecting the membrane. In looking through the speculum the outer edge of the manubrium is seen as a yellowish-white, sharply defined line passing downwards from the short process, most distinct about two millimetres above the end of the manubrium where the edge is the sharpest. At the end of the manubrium this edge is seen to bend a little forwards and downwards. The posterior surface of the manubrium can also be seen behind this white

[1] Archiv für Ohrenheilkunde, vol. xi., page 2.

line and followed downwards by its indistinct outline from the short process about two thirds of the length of the manubrium; it appears less distinct than the outer edge just described, because it does not lie in direct contact with the membrane; its color is yellowish-white, with a tint of red derived from the reflection of the promontory, but much less white than the outer edge of the bone; it is from one half to three fourths of a millimetre broad at the short process, and gradually narrows till it merges into the outer edge. The lower portion of the anterior surface of the manubrium is seen in the same manner through the membrane and forms the yellow spot anterior to the end of the manubrium.

Trautman confirmed this explanation by taking a fresh preparation and coloring the anterior surface of the manubrium red; he found that the yellow spot thus became red, but no change was produced by coloring any other parts of the tympanum. He also found that by puncturing the yellow spot with a fine needle the anterior surface of the manubrium was always pricked; also that by rotating the hammer on its long axis the size of the yellow spot was increased or diminished according as the anterior surface was exposed or hidden.

The yellow spot is of value for diagnostic purposes, according to Trautman, in the following conditions: —

(1.) In thickening of the epidermal layer the yellow spot would disappear earlier than the sharp edge of the manubrium.

(2.) Opacities of the membrane without simultaneous thickening would only alter the color of the yellow spot.

(3.) Rotation of the hammer on its long axis alters the form of the yellow spot.

(4.) If the yellow spot does not move on inflation of the ear, either anchylosis of the malleus and incus has taken place or the malleus is attached to the labyrinth wall.

Perforation of the Mastoid Process. — In the last two volumes of the *Archiv für Ohrenheilkunde* Schwartze continues his record of cases of perforation of the mastoid, which was begun several years ago, and which has now reached fifty in number. The publication is not yet complete and he has not given his conclusions, but some points of practical interest should be mentioned here, as it will be some time before the record is finished. The cases are given in full with the well-known care of the author, and embrace many varieties of mastoid disease and its complications. Begun years ago, before the disease was as well understood as now, the whole article serves to show the gradual development of the pathology of the disease and of the operation of perforation. After the publication is completed we shall have occasion to refer to it again in these reports, but now desire to call attention to one or two points.

In regard to the method of operating: in the earlier cases the trephine

and the drill were used for opening the bone, but Schwartze has now given up both of these instruments and uses instead a sharp gouge and chisel, with which the bone is gradually cut away. He was led to prefer the gouge from his experience in cases of hyperostosis in which the mastoid cells were partially filled with a growth of bone or even wholly obliterated. In operating on one such case with the trephine the inner table of the skull was opened and the lateral sinus exposed, owing to the difficulty of judging of the depth to which the instrument penetrated. Again, in such cases it is often necessary to change the direction of the opening and turn more towards the antrum of the mastoid in order to find the cells which are free from the hyperplasia, a thing dangerous and often impossible to do with a trephine. With the gouge and chisel, however, the bone can be removed bit by bit in any direction desired, and, as Schwartze thinks, there is much less likelihood of injuring the brain.

Among his cases Schwartze has met several instances of complete hyperostosis of the mastoid, all of the cells and even the antrum itself being obliterated by a solid bony growth. One case of reflex epilepsy from disease of the ear, which was cured by perforating the mastoid cells, is of special interest. The only accidents met with in the operation were exposure of the transverse sinus from removal of the inner wall of the mastoid, and opening of the middle fossa of the skull in the same way. The first case did well. The second is interesting as it occurred in trying to reach the antrum mastoideum; the patient died of traumatic meningitis, and the autopsy showed a malformation of the petrous bone which explained the accident.

ATTFIELD'S CHEMISTRY.[1]

We have already noticed the fifth edition of this work (August 21, 1873, page 190), and have little more to say concerning the present edition. The principal addition which has been made consists of "engravings of most of the important pieces of apparatus employed in studying chemistry experimentally," and a notice of some of the substances which are official in the Indian pharmacopœia. The fact that this work has passed through seven editions (four English and three American) since 1867 attests its value.

We must repeat that those portions of the book devoted to physiological, urinary, and toxicological chemistry are extremely incomplete, and had better have been omitted; and we observe that the errors noticed in the fifth edition remain uncorrected. For example, the statement that bile is best detected in

[1] *Chemistry: General, Medical, and Pharmaceutical, including the Chemistry of the United States Pharmacopœia.* A Manual on the General Principles of the Science and their Applications to Medicine and Pharmacy. By John Attfield, Ph. D., F. C. S. Seventh Edition. Revised from the sixth (English) edition by the author. Philadelphia: Henry C. Lea. 1876.

the urine by Pettenkofer's test (which is the test for the biliary acids, and will not detect bile in the urine on account of the small amount of those biliary constituents present in urine physiologically or pathologically) is still adhered to. E. S. W.

GRAY ON DARWIN.[1]

THE essays here collected have appeared in various journals since 1860, and are valuable not only from their intrinsic merit as criticisms, but as showing the impression produced on the mind of an eminent critic by the progress of the theory. Few men, we think, have better reason to pray to be delivered from their friends than Mr. Darwin, for the host of absurdities to which he has most unjustly been made to stand godfather would have ruined a weaker man's reputation and have left even his not unscathed. It must then be a great satisfaction to him to find so consistent and able yet temperate a supporter as Professor Gray, especially in a community where Darwinism was not cordially greeted. It is not our province to discuss the question of evolution, and the fact that Professor Gray naturally considers it by preference in its botanical aspects puts it still further out of our reach. Without, therefore, committing ourselves to the validity of his arguments, we may nevertheless praise the scholarly and truly scientific way in which Professor Gray discusses this complicated theory.

A CENTURY OF AMERICAN MEDICINE.[2]

THE publishers of the *American Journal of the Medical Sciences* have done well to give the public in one volume the articles which have chiefly distinguished the journal during the present year. In these papers we have the progress of practical medicine set forth by Dr. E. H. Clarke, to whose work is appended a history of the discovery of modern anæsthesia by Dr. Henry J. Bigelow. Surgery was entrusted to Dr. S. D. Gross; obstetrics and gynæcology to Dr. T. Gaillard Thomas, and Literature and Institutions to John S. Billings. We have said already how well these gentlemen have performed their work, and the publishers are right in stating in the preface that these papers "taken as a whole present a complete and connected review of the progress of medical science in America during the whole of the period in which medicine can be considered to be a science." Not its least merit is that it has finally settled the question of the discovery of anæsthesia.

CARPENTER'S PHYSIOLOGY.[3]

THE eighth English edition of this valuable text-book was noticed in the JOURNAL last February. The volume before us at that time bore the name

[1] *Darwiniana.* Essays and Reviews pertaining to Darwinism. By ASA GRAY. New York: D Appleton & Co. 1876.

[2] *A Century of American Medicine.* Philadelphia: Henry C. Lea. 1876.

[3] *Principles of Human Physiology.* By WM. B. CARPENTER, M. D., etc., edited by HENRY POWER, M. B. A new American from the eighth revised and enlarged English Edition. With Notes and Additions by FRANCIS G. SMITH, M. D. Philadelphia: Henry C. Lea. 1876.

of an American publishing firm, and its English origin was indicated only by its general appearance.

The present volume has received but trifling additions at the hands of the American editor, and requires therefore no special notice. It should be mentioned, however, that the American reprint, owing to its having a larger page and being better bound, is much less unwieldy than the English volume.

DOWELL ON YELLOW FEVER.[1]

THE *raison d'être* of this book is thus set forth very modestly by the author in the opening sentence of his introduction: "In compiling this little work, I have had in view the false impressions I had obtained from our text-books and the compilations now in publication, which I propose to correct from my personal experience, which is now equal if not superior to any one living in the United States, as I have treated over two thousand cases in hospitals and private practice." And a little farther on it is remarked that "no one is competent to write on yellow fever who has not seen several epidemics and at least several hundred cases." By the same token, the critic should withhold his pen from noticing any "little work" of this nature unless he shall have had "personal experience" with regard to *more* than several epidemics and *more* than several hundred cases. The want of this knowledge shuts us off from attempting a discriminating review of Dr. Dowell's literary venture. We are compelled to content ourselves with a few choice extracts from the volume before us, and will leave the reader to decide whether he will discard La Roche and Louis, and adopt Dowell as his authority on yellow fever.

"Infectious yellow fever is propagated alone by fomites (germs) or personal contagion and originates in no other way. These cannot live in a temperature above 212 nor below 32° F., or 100.0 Centigrade. . . . . This cause I have assumed is animalcular or fungotic (microscopic) and partakes of the nature of the grasshoppers of Egypt and the western prairies, or the smut in cereals; but these are too small to be observed with any instruments we now have, and have so far eluded demonstration; but if we compare the effects of cold and heat on gnats and mosquitoes, it will not be difficult to believe it is of the same nature as it is controlled by the same natural laws. . . . Hence I believe the *true cause is an animalcule* so small that we have been unable yet to develop it, though there are some efforts being made in that direction which foreshadow success."

"Quarantine, if effectual in persons and ships, will prevent its importation and prevent it from spreading; . . . . but exclusion by quarantine I consider impossible."

[1] *Yellow Fever and Malarial Diseases, embracing a History of the Epidemics of Yellow Fever in Texas; New Views on its Diagnosis, Treatment, Propagation, and Control; Descriptions of Dengue, Malarial Fevers, Jaundice, the Spleen and its Diseases, and Diarrhœa Hœmorrhagica; with Practical Remarks on their Successful Treatment, etc.* BY GREENSVILLE DOWELL, M. D., Professor of Surgery in Texas Medical College; late Professor of Surgery in Galveston Medical College; formerly Professor of Anatomy in Galveston Medical College; Honorary Member of Boston Gynæcological Society, etc. Philadelphia: Medical Publication Office. 1876.

"Not more than one in three turn yellow that dies of black vomit. . . . . This black stuff is often found in the bowels when not vomited up and not more than one in every three that die throw it up."

"Unassisted or not treated, about seventy-five per cent. will die. . . . . Well nursed and well treated, in healthy subjects, about five per cent. will die. But, I regret to state, this is not the report made to our surgeon-general in 1867; over one in every three died and in many cases the loss was fifty per cent. But so far as I saw in this city the management was horrid. . . . . I attended the hospital throughout but could not enforce my rules or have my medicine properly administered."

The *sine quâ non* of treatment is the following, not original with the author, but invariably recommended by him: —

"℞ Hyd. ch. mitis,
Quinæ sulphatis,
Opii et ipecac pulvis . . . . . ää grs. xij.
F. Charts No. 4. Sig. One every three hours."

"I allow my patients lemonade, as much as they want, throughout the disease, and this must be closely watched or it will produce serious ptyalism, which should be avoided."

"Patient must be gently fed when fever goes off, if there is no bad symptoms, or he will sink and the stomach will prey on its own membranes and nausea and vomiting will follow."

"My success was wonderful in comparison with others."

"All habitual drinkers died; some died with black vomit, some with uræmia. None recovered who were taken while drunk, that I know of. Four or five cases died who were reported to have had the fever, but I think they died from drunkenness, as they went from house to house drinking 'like fish.' These were not second cases but killed themselves with whisky. This was disputed by Dr. Powell, but is as true as heaven."

"I was several times refused permission to see my patients by a lady nurse, because I gave calomel and water. May God forgive her for she knew not what she was doing. No nurse of any *experience* should *violate* a doctor's instructions; if they would think one moment, they would not be mean enough to do so."

"The following is a table of recoveries and deaths of the number attacked, according to race, color, condition, age, sex, habits, occupation, and complication with other diseases, made up from my own observations and general reading: —

	Recovered.
Consumptives (in suppurating stage)	1 in 20
Drunkards (habitual)	1 " 10
Washerwomen (laundresses)	1 " 5
Syphilis (tertiary)	1 " 3
Catholic Priests	1 " 2
Doctors	5 " 8
Ministers of Protestant Churches	3 " 5
Blacksmiths, hatters, engineers	4 " 5
Adults, in most epidemics, male and female	5 " 6
Adult males, in most epidemics	4 " 6
Adult females, in most epidemics	6 " 7."

We have quoted sufficiently to warrant our commendation of the book as a very entertaining one to medical readers of intelligence.

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL OBSERVATION.

O. W. DOE, M. D., SECRETARY.

OCTOBER 2, 1876. *Intestinal Obstruction of Eighteen Weeks' Duration.* — DR. J. G. BLAKE reported a case of intestinal obstruction, which is printed in full elsewhere.

DR. ELLIS, who saw the case in consultation with Dr. Blake, remarked upon the obscure nature of the lesion, inasmuch as there was no inflammation attending it; but as constrictions arising from bands and adhesions of effused lymph, tumors pressing upon the intestines, twists, and displacements were not accompanied by an inflammatory process, it was probably one of these lesions rather than intussusception. With reference to operative procedures, Dr. Ellis thought if there was no tumor or solid growth pressing on the intestines, had an operation been performed the parts might have been replaced.

DR. PORTER mentioned the case of a gentleman seventy-seven years of age whom he had recently seen with Dr. Gerry, of Jamaica Plains. This patient, after being sick a number of days, passed seventeen inches of intestines, and recovered. He has now an operation daily without assistance from medicine or injections.

DR. HAY inquired as to the size of the instrument used in drawing off the gas, and asked if the contents of the bowels were not likely to pass into the peritoneal cavity.

DR. BLAKE said he used the smallest-sized needle which comes in the case with Potain's aspirator, for removing the gas, and the next larger size for removing the contents of the intestines, and he saw no danger to be apprehended from them. Dr. Morrill Wyman had used a much larger size with no untoward results, usually puncturing and allowing the gas to escape.

DR. MINOT said he had often used a subcutaneous syringe for this purpose, and with a small trocar he had drawn off intestinal contents.

DR. ARNOLD referred to the case of a child who went six weeks and two days without a movement of the bowels, notwithstanding the daily use of medicine to produce one; on the last day, when no medicine had been given, the patient had a natural dejection.

DR. CHADWICK objected to the use of needles on account of the danger of injuring the opposite wall of the intestines after the gas had escaped. He advised the substitution of the trocar with stylet, and suggested that a rubber tube be attached so as to allow the gas to pass off through a basin of water.

DR. BLAKE said he had made use of both the pump and the puncture alone, but had found much more relief from the former than from the latter.

DR. FITZ inquired how long after a commencing obstruction an operation could be performed with success.

DR. BLAKE said he knew of no definite time.

OCTOBER 16, 1876. *Growth of a Doubtful Character upon the Gums of a Child.* — The regular paper for the evening was read by Dr. S. H. DURGIN, as follows: —

D. A. was a well-developed, healthy female child, born in March, 1874, of

healthy American parents. The father had been a widower, the mother a widow, and each had lost an only child. The child of the former died from some disease of the spine when about ten months old. That of the latter died from cholera infantum when six months old. This is the first and only child of the present marriage, the father being about fifty and the mother about thirty-four years of age.

At the birth of this child the mother had no milk for it, and condensed milk was substituted. It nourished and grew well on this food for nine or ten months, when groats and occasionally meat-juice were added. The first summer was passed without serious illness. Diarrhœa occurred now and then, but was never obstinate.

In December, when the child was nine months old, and after the gums had twice been divided with the lancet to relieve the congestion, the two upper central incisor teeth came through. The corresponding under incisors appeared about a month later, when the four teeth and the gums looked perfectly healthy in all respects. Very soon after the appearance of the two under central incisors, the gums about the upper ones assumed an unnaturally red and slightly swollen appearance, then a very dark purple spot came upon the labial portion of the gum above one of the upper central incisors, which gradually spread over both gums, extending laterally somewhat beyond them on either side. At the end of two months this unnatural gum had so increased in size that the labial and lingual portions met at the ends of the two upper incisor teeth, completely hiding the latter from view. The tumefaction at this time was from one to two lines in thickness, or at least three times the ordinary thickness of healthy gums. It presented a smooth, dark surface, had an elastic and moderately firm feel, and was not particularly tender. The growth appeared upon the lower gums later, and was neither as large in size nor as dark in color as that upon the upper ones. There was no bleeding of the gums upon pressure, and no tendency to hæmorrhage in any part. Tenderness was not marked until after the gums had extended below the ends of the upper incisors, when they became subject to frequent irritation by exposure to the air, and by contact with the nursing bottle and whatever else the child might put into its mouth. Crying caused the tumefaction to increase very little in size and to look tense and darker in color.

During the first two months of this singular appearance of the gums, and while the child appeared to be well nourished, no treatment was resorted to except the local application of astringents. The frequent use of a strong solution of tannin in glycerine, of carbolic acid in glycerine, or of persulphate of iron, applied with a camel-hair brush several times daily, caused a moderate shrinking in size and a lighter color for a few days, and then the growth suddenly resumed its ugly appearance.

During the next month, March, the child was more fretful, did not thrive as before, and its flesh was not so hard or its color so good. The condition of the gums did not change materially. The applications to the gums were occasionally made for a few days at a time, and cod-liver oil and tincture of iron, a teaspoonful of the former to four drops of the latter, were given three times daily, and the child was taken out-of-doors every day when the weather would permit.

During the fourth month there was no increase, but possibly a decrease in the size of the gums, with a paler hue and less firmness to the touch. The same treatment was pursued with an additional amount of out-door air, and more meat-juice in the food.

About the end of the fourth month the child, while playing with a button hook, accidentally tore away a portion of the gum from one of the upper teeth. The bleeding was profuse for a few moments, but stopped without interference. Carbolic acid and glycerine were applied with the brush twice a day for two or three days, when a marked improvement began and went on rapidly, and in about three weeks the gums were all in a perfectly natural condition.

In the early part of February, or about two weeks after this abnormal condition of the gums was seen, the child, having been active in the use of its limbs, standing with slight support, suddenly gave up all use of her legs, and in a great measure that of her arms. She could bear no weight upon the legs and the least movement of them gave pain. She would sit quietly without apparent discomfort, and occasionally pick up and handle a toy. There was no tenderness to be found about the spine, and none could be detected about the hip-joints.

Special tenderness could not be located anywhere, yet the child did not like to be moved and was not inclined to move herself. This condition lasted about three months, and then gradually improved. The child walked when eighteen months old, had eight front teeth, and was in all respects healthy. She is now two and a half years old, has all her milk teeth, weighs thirty-five pounds, and is well.

In answer to the inquiry of Dr. C. P. Putnam regarding the nature of the growth, Dr. Durgin replied that he, as well as others, was unable to give any positive diagnosis of the affection.

Dr. Ingalls, who saw the case with Dr. Durgin, said he had consulted a number of authorities, but had found the literature of the diseases of the gums very meagre. In the case reported, the discoloration and moderate tumefaction rendered it certainly a curiosity. It did not, when he saw it, resemble a fungus or a nævus; it was hard to the touch and did not bleed readily, and what hæmorrhage there was ceased spontaneously. The fact of the child's losing the use of its limbs was a peculiar feature. Whether the two affections were connected or not he was unable to say.

Dr. Fifield remarked that he had seen an affection in the adult resembling this, which seemed to be an hypertrophy depending upon an inflammatory condition of the periosteum, combined with caries. He differed from those who thought it to be of a malignant character.

Aborted Blighted Ovum. — Dr. Cutler showed an aborted blighted ovum, of the second month, which occurred in the practice of Dr. Hastings, with the following history: About a year ago a man presented himself to Dr. Hastings for treatment. He had a hard chancre, and has continued under observation since. Contrary to advice, about two months ago he married a healthy woman. Two of her catamenial periods, previously perfectly regular, were passed by, and Dr. Hastings was suddenly called when the specimen presented to the society came away with hæmorrhage. On examination it was seen to

consist of a pear-shaped body, with thin walls and a cystic centre filled with opaque fluid. Under the microscope, villi of a chorion were seen in a somewhat advanced fatty state. On careful examination no trace of fœtus or cord was seen. Since the marriage the husband has been treated for mucous patches, general pains in bones, etc.

Dr. Tarbell asked how large the ovum was.

Dr. Cutler replied that it was about three inches long.

Dr. Tarbell said he had met with a similar case within the past year. The lady supposed herself to be between two and three months advanced. There was no fœtus found, and the fluid was quite transparent. The amnion and chorion were present.

Dr. C. P. Putnam said he had seen a case at the Massachusetts General Hospital, between three and four months advanced, where there was no fœtus.

Dr. Cutler asked if there was any history of syphilis in these cases.

Dr. Tarbell said he had given his case to an expert, who had seen a number of such cases, and neither of them had thought of its being syphilitic.

Dr. Putnam knew of no syphilis in the case referred to by him.

Dr. Fitz said he had seen a number of cases where the fœtus was absent or only the umbilical cord left. Such cases had usually been considered syphilitic.

Uterus and Appendages of an Infant. — Dr. Cutler showed the uterus and appendages of a child that died five hours after birth. The uterus appeared normal; the vaginal portion of the cervix, however, was quite three quarters of an inch long, hyperæmic, infiltrated with serum, and had a round, patulous os externum, containing a tenacious plug of mucus. On microscopic examination the mucous membrane was found to be in a state of hypertrophy, the villi were very large and distinct, and each contained a looped vessel full of blood, and was capped by cylindrical epithelium.

This case occurred also in the practice of Dr. Hastings, and is interesting from the possibility of its throwing some light on the cases of bloody discharge from the vagina, occurring in new-born children, described by certain authors. In this case, however, no effused blood was discovered in the vagina.

Cancer of Œsophagus. — Dr. Warren reported the case, and Dr. Fitz showed the specimen. J. M., fifty-five years of age, entered the Massachusetts General Hospital April 26th; for two months previously he had had at times difficulty in swallowing, but none of importance until a week previous to his entrance. Dr. Gay found it difficult to introduce anything but a small-sized bougie. The patient improved under dilatation, and in a few weeks left the hospital, but returned in July, the difficulty in swallowing having greatly increased. A full-sized pliable urethral bougie was the only instrument which could be introduced through the stricture. This passed with comparative ease. To dilate more effectually, several holes were made in this instrument and a condom was spliced over them. On introduction water was injected into the bag thus formed, and on withdrawal considerable dilatation was effected. The treatment was continued during the summer. No solid food, however, could be taken. The patient continued to grow thin and weak slowly.

There was from the beginning a cough which increased in severity, and at night was frequently quite troublesome. The passage of the instrument also gave rise to a spasmodic cough. In September the voice began to grow husky and breathing was somewhat difficult. An examination by Dr. Knight revealed a paralysis of the posterior crico-arytenoid muscles, leaving the vocal cords nearly in apposition. A swelling in the neck had now become distinctly visible, and about the 1st of October there was sudden increase in its size, accompanied by an aggravation of all the symptoms, and the larynx was seen to be pushed over to the right side of the neck. The swelling subsided somewhat the next day, but the patient had suffered so much from dyspnœa, which was still a threatening symptom, that Dr. Warren decided to perform tracheotomy. The patient, although somewhat relieved, continued to have a purulent expectoration, while all efforts at swallowing food became unavailing, and he died October 14th.

Dr. Fitz showed the œsophagus and trachea, stating that the immediate cause of death was evidently an acute gangrenous broncho-pneumonia, such as results from the admission of food into the smaller air-passages. The various organs of the body were in a state of extreme atrophy, and the stomach and small intestines were quite empty, not even distended with gas. The œsophagus was obstructed from just below the cricoid cartilage nearly to a point corresponding with the bifurcation of the trachea, by a dense, grayish-white mass of which the structure was that of epithelial cancer. The surface was somewhat ulcerated, and the œsophageal canal was deflected, and in parts was not more than a quarter of an inch in diameter. The cancerous growth extended backwards into the trachea, decidedly projecting above the posterior wall. The tissues about the trachea on the right and adjoining portions of the thyroid gland were also invaded. The pneumogastric nerve on the right side was lost in the cancerous mass, while on the left it was in the wall of a foul-smelling, trabeculated, gangrenous abscess, as large as a hen's egg, which communicated with the œsophagus by a small wound opening just above the obstructing growth.

Numerous calcified trichinæ were observed in the laryngeal muscles.

Case of Hypochondriasis. — Dr. Fisher reported the following case of hypochondriasis occurring in a man of phthisical constitution. The patient, a stone mason, forty-seven years of age, had always enjoyed good health until his present illness. His father died of phthisis at the age of fifty. Two years ago he drank from a spring near his quarry, and noticed at the time that the water was turbid, his wife remarking that there were small eels in the glass. A year after, he became dyspeptic, and attributed his whole trouble to having swallowed an eel. His symptoms increased until he had lost forty pounds in weight, and he was unable to retain any food unless he took bitter water immediately after any attempt at swallowing. One year ago he began to have a slight cough, and at one time had an attack of hæmoptysis. He was treated by various physicians, some of whom encouraged him in his belief regarding the nature of the disease, and advised abstinence from meat and the use of whisky in half-pint doses. The proper treatment in this case, Dr. Fisher said, seemed to be to substitute for his imaginary evil the danger he incurred

of bringing on serious pulmonary trouble; and for dietetic and medicinal treatment meat once a day, the moderate use of stimulants, and the syrup of the hypophosphites combined with cinchona.

DR. FOLSOM inquired as to the prognosis of the disease.

DR. FISHER thought that depended upon whether the pulmonary trouble advanced or not.

DR. FOLSOM referred to the delusions of pregnancy, and mentioned one case in which the lady suffered the pains of labor for nearly an hour before the delusion was removed. He thought all such cases improved much faster when separated from their friends.

DR. FISHER remarked that he had always noticed home-sickness to be a favorable indication in these cases.

DR. AMORY asked if the incipient phthisis began at the same time with the delusion.

DR. FISHER said he was unable to answer with certainty, but he had noticed that delusions generally occur in those persons who inherit phthisical constitutions rather than in those in whom the disease has actually occurred.

DR. BOLLES referred to a case of mental depression in a lady, arising from loss of property, which has continued since last winter, gradually increasing in severity, the chief symptoms being loss of sleep and a lack of interest in her home and friends. He had tried tonics and sedatives *ad infinitum;* the only benefit derived was from bromide and hyoscyamus, which produced rest every other night.

DR. MINOT recommended whisky at night, and also narcine.

DR. J. J. PUTNAM said lactate of soda in large doses had been highly spoken of abroad to produce sleep in cases of excitement.

DR. FISHER asked Dr. Bolles what effect he had derived from the use of chloral.

DR. BOLLES replied that when the patient had a good night's rest from chloral, she was much worse the following day.

DR. FISHER remarked that in many cases where chloral had been continued for a long time he had found it to exert an injurious effect.

ENGLISH CORONERS.

IT appears that the coroner system of Great Britain has fallen into as profound contempt as our own, which is derived from it. Similar causes have brought about the same result. Mr. Herschell, Q. C., has recently delivered an address at Liverpool before the Social Science Association which has occasioned much comment, and it is hoped will lead to reform. The public in England appears to perceive the danger and disgrace which the system entails, and both medical and literary journals are discussing the question.

The *Pall Mall Gazette* expresses itself as follows: "The 'coroner and his jury' are the latest additions to the number of these doomed institutions. After having laughed with good-natured indolence at 'crowners' quest law' for nearly three hundred years, we are at last seriously reminded that if the

grave-digger's jests have a less complete application in these days, we owe no thanks to anything but accident. The coroner, as Mr. Herschell said, 'is appointed, his court is constituted, and proceedings before him are conducted almost exactly in the same fashion as they were in the days of Queen Elizabeth.' Nor can the coroner plead that he and his system are harmless anachronisms."

Coroners, we believe, are in England elected by the freeholders of each county, and are almost invariably either physicians or lawyers. In America they are usually physicians or pseudo-physicians, and the manner of their appointment is determined by the statute law of each State. In New York they are elected by the people, and in Massachusetts appointed by the governor and council. The latter method is theoretically the better, but its practical working is not such as to lead us to boast of our superiority. England has suffered as we have, for more than a hundred years ago Blackstone wrote that "through the culpable neglect of gentlemen of property the office had fallen into disrepute and got into low and indigent hands." We do not dilate on the misfortunes of our English friends by way of consoling ourselves for our own, but in order to show that our grievances are similar and that we must hasten not to be last in obtaining redress. Our readers may judge for themselves whether, *mutato nomine*, the following editorial remarks of English journals and anecdotes of English practitioners might or might not apply to our case. The *Medical Press and Circular* of November 1st thus speaks of the coroner system: "From its inception the system is thoroughly bad. The mode of election of the judge is ridiculously inappropriate, the circumstances which set him in motion are indefinite, the mode of procedure is slip-shod, the jurors are as a class entirely unsuitable, and the verdicts are, as a consequence, worthless."

The following is from a leading article in the *British Medical Journal* of November 4th: "The large number of thirty-five thousand inquests are held yearly in England and Wales, and in a considerable proportion of these an inquiry, on a proper examination of the medical facts, would probably be found unnecessary if these were in the first instance submitted to examination by a competent medical officer. These inquiries are frequently most painful to the feelings of surviving relatives. In instances of sudden death plainly arising from natural causes, coroners have insisted upon holding inquests which were certainly not required. They were unable to perceive or unwilling to admit that a sudden death may, and frequently does, depend on natural causes, and, acting upon the letter rather than the spirit of the ancient law, they have created scandal by thrusting themselves into private houses and going through all the formalities of an official investigation as if a murder had been perpetrated."

In the same number of that journal Mr. Joshua Parsons, M. R. C. S., gives a number of anecdotes of the doings of country coroners. He mentions the case of a drunken man who struck a furious blow at his brother and fell dead, the blow not being returned: "A post-mortem examination was ordered, and I was able to give positive evidence that the man died of apoplexy, without a sign of personal injury. In spite of this evidence the coroner directed the

jury to find a verdict of 'manslaughter,' and then delivered himself of the following speech, which made such an impression upon my mind that I am able to report it nearly, if not quite, *verbatim*: —

"'E. R. These twelve gentlemen have made a very careful inquiry into the death of your brother, and considering the provocation you received, have thought it their duty to bring in a verdict of "manslaughter" instead of murder, and it is therefore my duty to commit you to prison on that charge; but I wish you to remember that, although you may escape the punishment of death, yet I have no doubt that in the sight of God a man who kills his brother is more guilty than one who does not.'"

He relates the case of a man found dead by the wayside without his money: "I saw the body after the inquest had been held, and found that although there was abundant evidence that he had been drinking with men of bad character, and had left his last halting-place in apparent good health, not only had no medical evidence been called or necropsy ordered, but that the corpse had never even been stripped for external examination. A verdict of 'Died by the visitation of God,' had been returned."

The following remarks and examples by the same gentleman are very suggestive: "In our days science is too often hired to be the handmaid of crime, and the pair together sometimes weave a veil through which the best-directed inquiries fail to penetrate. There is also reason to fear that some crimes, such as infanticide, are increasing in frequency as well as in subtlety amongst us. It therefore behooves us to see that our sentries are wide awake, with arms and accoutrements all in good order. That such is not the case, that the safeguard against crime which society is supposed to derive from coroners' inquisitions exists more in theory than in practice, has long been well known to medical men, especially those practicing in country districts. . . . . A friend, then my partner, was some years ago called upon to give evidence respecting the death of an illegitimate child who had been found in a privy. He was asked by the coroner, 'Do you think this child was born alive?' He answered, 'I am unable to give an opinion.' The coroner said, 'The child is in the next room; go and look at it.' He answered, 'I decline to do so as it is impossible to give an opinion which I can substantiate before a court of justice without a post-mortem examination.' No such examination was, however, ordered, and a verdict of 'Found dead' was recorded."

There is no doubt that reform is imperatively called for in England, as well as in Massachusetts. Where will it first be obtained?

MEDICAL NOTES.

— We understand that the Boston Dental College opens with thirty students.

— In a lecture on the treatment of varicose ulcers, published in *The Medical and Surgical Reporter* for October 21, 1876, Dr. G. L. Beardsley recommends *iron bandages* or *strapping* for varicose limbs. The bandage is not to be used until the limb has been made ready for it. The limb is first immersed in

warm water, vigorously rubbed, and the sore washed with liquor sodæ chlorinatæ. Esmarch's rubber bandage is then wound around the foot and up the leg to two inches above the ulcer. When at the upper extremity of the bandage the limb has been encircled with the rubber tubing or cord, and the bandage has been removed, the several varices will be found to have lost their form or size, and the irregularities of surface to be somewhat remedied. Take now a roller of new cotton cloth, half an inch wide and three yards long, and saturate it in solution of ferri subsulphas (one ounce of solution to one pint of water). Begin half an inch from the toes and envelop the foot with it, by nine or ten turns, each covering one fifth of the preceding circle. In this graduated way continue the roller up the leg as far as to the rubber cord, crossing the ulcer as though an unbroken spot, in tense and neat folds. The free tail of the bandage is then bound down by adhesive strips, the rubber cord untied, and the same solution of iron poured on the bandage until well wet. A cotton stocking is now drawn over all, and the patient discharged, with orders to report on the fifth day. Of three hundred and fifty-five varicose ulcers, two hundred and ten were treated by the iron bandages, and all closed except twenty-seven. Of these, twenty-five told of specific dyscrasiæ, and with not a few evidences of necrosis were associated.

— Ammonium bromide in hay-fever is recommended by E. C. Seguin, M. D., in *The Medical Record* for November 11, 1876. Reasoning from the well-known fact that the bromides when administered for a number of days produce anæsthesia of the pharyngeal mucous membrane, and also that a strong solution of the bromide is useful as a gargle in cases of irritable throat, Dr. Seguin suggested to a friend to make a trial of a solution of ammonium bromide as a wash for the nasal passages and as a gargle, to relieve hay-fever. He obtained great relief from adopting the suggestion, and a similar result was obtained in a second case. Dr. Seguin therefore asks the profession to make trial in hay-fever of (1) a solution of ammonium bromide, one or two drachms in an ounce of water, to be used as a gargle frequently. (2.) A solution of the same salt, in the proportion of ten or thirty grains to an ounce of water, to be inhaled into the nostrils, not forced in with a syringe or douche apparatus. He further suggests that it is probable that by means of a spray-producing apparatus these solutions may be better applied to the larynx, throat, and posterior and anterior nares.

— In a communication to *The Medical Record* of October 21, 1876, Joseph Worster, M. D., records some observations on the physiology of menstruation. He calls attention to the views of Dr. Kraus, of Vienna, regarding the importance of the normal function of the prostate gland to sexual competence. Dr. Kraus has further shown that as long as the seminal fluid remains within the testes, vesicles, and other seminal passages, it is colorless, odorless, and neutral in reaction, but that during its passage through the prostatic portion of the urethra the prostate gland pours out its secretion which colors the semen white and gives it the property of coagulation on exposure to the air. It moreover becomes alkaline in reaction. Semen taken from the vesicles is not subject to coagulation on exposure to the air, but continues transparent, colorless, and odorless. In the absence of the prostatic fluid, the spermatozoa of

the mammalia cannot live in the mucous membrane of the mammalian womb, but with its assistance they may retain their vitality from thirty-six to forty hours *in utero*. Dr. Kraus also insists upon an undoubted homology between the sexual processes of the male and female. A case observed by Dr. Worster tends to confirm this last-mentioned point. It was one of uterine inversion and consequent protrusion from the vagina. The body of the womb had descended through the cervix in such a manner that its internal surface was presented externally between the labia. Attempts to replace the organ had to be repeated at the intervals between four successive menstruations, as after each operation a lapse of some days was required to repair the damage from laceration. Having prepared to operate one morning, Dr. Worster observed a deep red blush suffusing the whole surface of the uterus presented to inspection, which consisted, of course, of the lining membrane of the organ. It was found that the patient was within four days of the menstrual period. He consequently desisted from operation, and observed the progress of the intra-uterine blush from day to day. It continued to thicken till it was about four lines deep, and had the appearance of a flattened mass of currant jelly retained in place by the decidua. It was an undoubted product of the utricular glands, and hence a true uterine secretion. On the fourth day the jelly began to break up, and a thin, scanty, pink fluid began to escape from the orifices of both Fallopian tubes. The proper menstrual discharge now commenced, consisting of the disintegrated uterine blush, commingled with the pink fluid oozing from the Fallopian canals. The latter did not constitute more than a hundredth part of the whole discharge. What special part the intra-uterine secretion plays in, or in what manner it promotes, the phenomenon of fertilization remains as yet undecided, but when it is considered that the prostate gland in the male is the homologue of the womb in the female, Dr. Worster thinks the inference a fair one that the uterine secretion acts as a menstruum protecting the ovum, and that its absence would be followed by infertility.

— A city without water: such, says the *Medical Times and Gazette* of October 21, 1876, was practically the condition of Dublin at the close of the previous and the beginning of that week. The single thirty-three inch main on which the Irish metropolis depends for its water supply burst. Notwithstanding every exertion, the pipes could not be relaid until a week had elapsed, and in the mean time the city and suburbs had to depend on the storage reservoirs at Stillorgan, which are capable of holding only seven days' supply. On Sunday — as a *dernier ressort*, we presume — the water from the canals was turned on, but, the pressure being inconsiderable, the higher parts of the houses in the city were absolutely without water. Water-closets were rapidly becoming intolerable nuisances from want of flushing.

— An English amateur bull-fighter, who recently killed two bulls at Barcelona, gave his share of the proceeds of the fight to the Barcelona hospital.

— In a recent inaugural dissertation, says *The British Medical Journal*, Dr. Stoltz gives an account of the excellent results of ten lying-in asylums that have been opened at St. Petersburg. Established on account of the danger that exists in the agglomeration of puerperal women, these asylums have only three or four beds in each; and, although several of them are placed in very

insalubrious districts, a six years' experience has proved their great utility. Of the 7907 women who have been delivered in them, only eighty, or 1.1 per cent., have died; while at the three hospitals the mortality has been 3.6 per cent.; so that the lives of two hundred women have been saved which would have been lost in the old establishments. Besides their great convenience in being distributed over the city, the cost of these asylums is much less than that of the hospitals, the expense of each patient being in the latter from nineteen to twenty-three roubles, while in the asylum it is only twelve roubles. A rouble is rather less than a dollar.

LETTER FROM NEW YORK.

MESSRS. EDITORS, — In a city of the size and population of New York, where the number of those unable to obtain proper medical and surgical relief is so great, it is not strange that the number of hospitals exceeds that in any of our other cities. Institutions for the treatment of special diseases are rapidly increasing, and, as information on this subject is being sought in other cities, it may interest the readers of the JOURNAL to give a brief account of what is being done for the relief of those suffering from deformities. If we leave out of consideration the number of persons who can be treated at the many dispensaries in the city, we find that there are a great many cases of deformities which those in charge of classes at these institutions cannot attend to, on account of the want of proper facilities and the expense incident to such treatment, leaving out of consideration the amount of time that anything like the conscientious care of these demands. As a rule, the general practitioner has not the time and often not the mechanical skill to take care of these cases; consequently those suffering from deformities are often left to the tender mercies of the instrument maker, or they fall into the hands of quacks. The great question to be solved in providing relief for this class was how to furnish instruments at a moderate expense, and often gratuitously, and at the same time skillful attendants. There are two institutions in New York where this class of cases can receive treatment: the Hospital for Ruptured and Crippled, and the New York Orthopædic Hospital and Dispensary. The former institution owes its origin to the efforts of Dr. Knight, who as early as 1842 first began to treat deformities in connection with the clinics in the medical schools. It was not until 1862 that an appeal was made to the public for funds to open a small hospital for the gratuitous treatment of deformed persons. In 1863 Dr. Knight gave up his house, which he provided with twenty-eight beds and facilities for the manufacturing of instruments, and it was only then that a real beginning was made. In 1870 sufficient funds had been collected to put up the building now known as the Hospital for Ruptured and Crippled, on the corner of Forty-Second Street and Lexington Avenue. The building occupies a lot of ground one hundred and twenty-five by one hundred feet on the northeast corner of the avenue, and cost two hundred and fifty thousand dollars. The structure is of brick, with hollow walls, which aid in the heating and ventilation. It is heated by steam, and has in addition four ample fire-places in each

ward. The basement has a reception room for patients, a kitchen, etc., a steam engine for working the elevator, and a workshop. The first floor affords rooms for private patients and apartments for the resident staff. The second and third floors are occupied by wards, which measure thirty-two by twenty-two feet. The fourth floor is thrown into a large room called the "sun-room." This story consists of what might be called a Mansard roof with glass sides, so constructed that it can be open in summer, inclosed in winter; exposed to the sun on all sides, and yet shaded from it overhead. This is used as a play-room for the children, and has in it gymnastic apparatus, and is under the supervision of a professional gymnast, who receives his instruction from the medical staff. This play-room is connected by means of an elevator with each floor. The hospital has accommodations for two hundred patients. Only children between four and fourteen years of age are admitted. The object of the hospital is to "supply skillfully-constructed surgico-mechanical apparatus and the treatment of in-door and out-door patients requiring trusses and spring-supports; also bandages, lace-stockings, and other suitable apparatus for the relief and cure of cripples, both adults and children." From the above it appears that the object of the charity is to treat many cases not usually included under the name orthopædic. The hospital is under the charge of Dr. Knight, who is resident physician and surgeon, and three assistants, and is open for the reception and treatment of out-door patients daily from nine until twelve o'clock, and on Wednesday evenings from seven until nine o'clock. Apparatus is furnished free to those living in the city who are unable to pay. It is not given but only lent, with instructions to report at the hospital at stated intervals. If this rule is not complied with, and the patient can be found, the apparatus is considered forfeited. The income of the hospital is derived from the city from interest on investments, pay of patients, and donations. For the year ending May, 1876, the total receipts were $123,768, while the expenditures amounted to only $42,370, carrying $80,000 to the permanent fund. The city of New York pays at the rate of $150 a year for each indigent child. During the year ending May, 1876, 6226 patients were treated, of which 5176 were out-patients. Of these, 2500 were suffering from hernia in its various forms. One thousand six hundred and sixty-eight of the total number treated were children under fourteen years of age. Of these, 117 are recorded as suffering from "white swelling," 180 from hip disease, 369 from lateral curvature and caries of the spine, 274 from paralysis and consequent deformities, 174 from club-feet, 217 from bow-legs, 108 from weak and knock-knees, 150 from rachitis, and 79 from weak ankles. Of the adults there were 447 cases of prolapsus uteri, and 611 cases of varicose veins. Three hundred and forty-nine cases were treated as in-patients. Since May, 1863, 37,697 patients have been under treatment as out-patients. There is no regular attending staff except the resident physicians; there is, however, a consulting board consisting of ten physicians, four surgeons, and an ophthalmic surgeon. All instruments are manufactured in the hospital.

In 1866 the New York Orthopædic Dispensary was established, its object being "to afford treatment with special reference to diseases and deformities of the spine and hip-joint, and other of the more serious diseases of the bones and joints requiring surgical and mechanical treatment."

Until within the past year its organization was similar to that of the dispensary of the Hospital for Ruptured and Crippled. In 1872 the trustees erected the building now known as the New York Orthopædic Dispensary and Hospital, located at 126 East Fifty-Ninth Street. The dispensary was opened in May, 1873, and the hospital on October 1st of the same year. The building is twenty-five feet front, and four stories high. The basement has a kitchen, besides a thoroughly equipped room for the manufacturing of all kinds of apparatus required. The motive power is steam. The whole building is thoroughly heated and ventilated. The first floor is used for the reception of patients and for dispensary purposes, the second and third floors for wards capable of accommodating thirty-five patients, but at present they have only twenty beds. There are no free beds; children under fourteen years of age are charged five dollars and adults seven dollars per week. Last January the organization of the hospital was changed by the appointment of an attending staff consisting of four surgeons and five consulting surgeons, the dispensary remaining under the charge of the orthopædic surgeon, with three assistants. All patients are expected to pay the cost of the instrument, but apparatus is not sold to patients or others; at the termination of treatment it is returned to the hospital. The institution also reserves the right to remove any apparatus and discharge any patient not complying with the directions of the surgeon. Those who are unable to pay at one time for the apparatus are allowed to pay in weekly or monthly installments. Of course there are many who are unable to do even this, and I am informed that the deficiency for the past year from this cause amounted to about two thousand five hundred dollars. The hospital all completed, including the engine, furnishing, etc., cost fifty thousand dollars. It certainly is a very complete building, and the trustees are to be congratulated that they have been able to accomplish so much. The institution has no permanent fund and no debt. It is dependent on voluntary contributions and the pay of patients for its support. The expenses for the past year were about ten thousand dollars. The orthopædic surgeons are at the dispensary daily from one to three P. M. to receive and treat patients. The attending surgeons make their visits as they may deem necessary. Since the establishment of the dispensary in 1866 there have been 1237 orthopædic cases under treatment, of which 535 were caries of the spine, 301 disease of hip-joint, 73 chronic synovitis of knee, 86 infantile paralysis, 71 club-foot, 51 lateral curvature of the spine, 28 bow-legs, 13 rachitis, and 73 were other orthopædic cases. During the past year there have been 542 cases under treatment, of which 51 were treated in the hospital. The average daily attendance was 17 patients.

It will be seen that the plan of conducting these two hospitals differs: one has an attending staff, the other has not; one is free, the other requires some remuneration from all patients. There is no question but that in a city of the size of New York a great many are treated as charity patients in our hospitals and dispensaries who are abundantly able to pay for professional services, and it does not seem to be an error to make the rule that every one applying to such institutions shall pay something, however small the amount may be, toward the support of the charity.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING NOVEMBER 11, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	413	20.24	29.35
Philadelphia	825,594	315	19.83	22.24
Brooklyn .	506,233	183	18.79	24.92
Chicago . .	420,000	150	18.57	19.75
Boston . .	352,758	127	18.82	26 20
Providence	101,500	41	21.00	19.02
Worcester .	51,087	16	16.28	20.91
Lowell . .	51,639	14	14.09	20 55
Cambridge	49,670	14	14.66	23.31
Fall River	50,372	13	13.42	23.99
Lawrence .	36,240	10	14.35	25.96
Lynn . .	33,548	7	10.85	19.23
Springfield	32,000	6	9.75	20.93
Salem . .	26,344	11	21.71	22.92

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Hours with John Darby. By the Author of Thinkers and Thinking. Philadelphia: J. B. Lippincott & Co. 1877.

The First Fonakigrafic Teacher. Amherst, Mass.: John Brown Smith, Author and Publisher. 1876.

Acta Columbiana. November, 1876.

Ophthalmic and Otic Memoranda. By D. B. St. John Roosa, M. D., and Edward T. Ely, M. D. New York: William Wood & Co. 1876.

Hauptmomente in der Geschichtlichen Entwickelung der Medicinischen Therapie. Von Dr. Julius Petersen. Kopenhagen: Andr. Fred. Höst und Sohn. 1877.

A Course of Elementary Practical Physiology. By M. Foster, M. D., F. R. S., assisted by J. N. Langley, B. A. London: Macmillan & Co. 1876. (For sale by James Campbell.)

The Ovulation Theory of Menstruation. Will it stand? By A. Reeves Jackson, A. M., M. D. (Reprinted from The American Journal of Obstetrics and Diseases of Women, October, 1876.)

On Masturbation and Hysteria in Young Children. By A. Jacobi, M. D. (Reprinted from The American Journal of Obstetrics and Diseases of Women, February and June, 1876.)

WE are in receipt of Walsh's Physicians' combined Call-Book and Tablet, which apparently is a very useful one. Published by J. B. Lippincott & Co., Philadelphia. Dr. Walsh's address is No. 227 Four-and-a-Half Street, Washington, D. C.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting will be held at the rooms, 36 Temple Place, on Saturday evening, November 25th, at seven and a half o'clock. The following papers and cases will be read: —

Dr. E. Chenery, Food per Anum.

Dr. A. F. Pattee, The Therapeutics of Gelseminum Sempervirens.

Dr. E. P. Gerry, A Case of Intussusception.

Dr. T. M. Rotch, A Letter from Vienna.

Tea, etc., at nine o'clock.

A. L. MASON, *Secretary*.

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FIFTEEN CASES OF STRICTURE OF THE URETHRA.[1]

BY EDWARD T. CASWELL, M. D., PROVIDENCE, R. I.

THE following cases of stricture of the urethra have occurred within the last few years, partly in private practice and partly in the Rhode Island Hospital. I regret that the notes of the earlier cases were not more precise. At the present time there is a limited tendency to recur to gradual dilatation as the most available method for the cure of stricture. Setting aside those cases to which this method is entirely inapplicable, my own experience would not lead me to prefer it to the more rapid means I have employed. Whether gradual dilatation or the method of over-distention will permanently cure a stricture so that the patient will be freed from all necessity for using sounds is not, I think, at present established. My experience will show, what in my opinion will prove to be the rule, no matter what method of operation is adopted, that the patient is safe only so long as he continues to pass an instrument at longer or shorter intervals.

CASE I. September 15, 1870. Mr. S. had been aware of the existence of a stricture for a couple of years. Was first seen by me in April, when he had retention of urine. After various unsuccessful efforts I at last succeeded in passing a No. 1 English flexible catheter and drew off the water. The catheter was allowed to remain in for twenty-four hours. At subsequent periods efforts were made to produce gradual dilatation. I however did not get farther than No. 4 English, and the patient's visits were very irregular. I therefore ruptured the stricture on the above-mentioned date with Holt's divulsor. No anæsthetic was used. He complained of but little pain, and only a few drops of blood followed the operation. Subsequently No. 11 English was passed without difficulty. Had no chill. Did well. No subsequent history.

CASE II. S. A., aged sixteen, entered the Rhode Island Hospital in February, 1871. Six years before he had a fall, striking the perinæum upon some hard projecting surface; at that time a physician attempted to pass an instrument, but he failed, and none had ever been passed.

[1] Read at the Quarterly Meeting of the Rhode Island Medical Society, September 20, 1876.

The patient had been in the hands of a homœopathic practitioner. For a year he had suffered from dribbling of the urine, and had worn a urinal. During all that time he said that he had felt the distended bladder. Abscesses had formed and opened in the perinæum, producing urinary fistulæ. He was much emaciated. On admission the bladder was found greatly distended, and an instrument could not be passed further than seven inches. On consultation it was decided to puncture the bladder over the pubes (aspiration was not then as well known as it is now), in the hope that after giving free exit to the urine, and rest to the urethra, some guide might be carried into the bladder. This expectation, however, was disappointed, and after a few days I performed the perineal section without a guide. The operation was exceedingly tedious, owing to the altered condition of the parts, and to the great difficulty of finding the posterior portion of the urethra. After long efforts I found that by pressing upon the bladder a few drops of water showed the urethral opening to the right of the middle line. The rest of the operation was then speedily completed, and a large-sized sound was passed into the bladder. A catheter was retained in this case for some weeks, being changed at proper intervals. The practice, however, is objectionable, and I would not again follow it. The patient had a slight chill and moderate urethral fever, but his recovery was perfect and his control over the bladder complete. A small fistulous opening still exists, through which a few drops of urine occasionally find their way. It causes him so little inconvenience, however, that he has avoided all treatment.

Case III. Mr. W. May, 1872. Has an old stricture which has existed for nine years. He has at two different times submitted to treatment by gradual dilatation. The stricture is five inches from the meatus and admits only No. 2 English. I ruptured it with Holt's instrument, the patient being under ether. Two hours after the operation he had a severe chill, which lasted but a few seconds. A catheter was left in for twenty-four hours. On the second day he was up, and dressed, and on the fourth he returned to his home in the country. No. 12 was passed on that day, and at regular intervals afterward.

Case IV. J. W. January, 1873. Rhode Island Hospital. Fifteen years ago he first noticed a diminution in the size of the stream; and at one time he had retention twice in a fortnight. On admission he was found to have retention with stricture at two points. A filiform bougie alone could be made to enter the bladder. The stricture was ruptured with Holt's instrument and a large sound was passed. A catheter was left in twenty-four hours. The patient had no chill and made a rapid recovery. I saw him last July, and found that he had had no return of the trouble, and continued to pass the sound according to directions.

Case V. J. B. February, 1873. Long standing stricture of gonor-

rhœal origin. Filiform bougie alone passed into the bladder. Ruptured with Holt's instrument. No. 11 English sound passed. Had no chill. Continues well and passes the sound.

Case VI. P. McG. January, 1874. Rhode Island Hospital. Has two strictures, one at seven inches from the meatus, and the other at four and three quarters inches. Nothing but a filiform bougie passed into the bladder. Ruptured with Holt's instrument. No. 12 sound, English, passed. Had no chill. Made an excellent recovery. No subsequent history.

Case VII. C. K. January, 1874. Rhode Island Hospital. Patient was about fifty years of age and had long led a most dissipated life. He passed a stream the size of a knitting-needle. I repeatedly failed in attempting to pass an instrument. After several attempts on different days I at last introduced a grooved Syme's staff, as I thought, into the bladder, and with that I rested, hoping to accomplish more on a subsequent day. This operation, however, was followed by severe chills and fever, septicæmia, and death. I supposed that I must have perforated the urethra, but at the autopsy, on the most searching investigation, no laceration of the urethra could be detected. I must say that I always considered the Syme's staff a most dangerous instrument, and I have never used it since the above experience, preferring the tunneled staff with the whalebone guide.

Case VIII. J. W. January, 1875. Rhode Island Hospital. Had gonorrhœa two years ago, and at times the urine dribbled away. A stricture exists six inches from the meatus. The passage of the smallest-sized bougie caused pain, and was followed by slight hæmorrhage and a chill. Meatus incised, and stricture ruptured by Voillemier's divulsor. No. 12 English passed easily. On the next day the patient had two or three chills, but no farther trouble. Four days after the operation he was up, and well. No farther history.

Case IX. C. C. January, 1875. Rhode Island Hospital. Gonorrhœal stricture, which has existed for some time. There are two strictures, one admitting a filiform bougie, two and a half inches from the meatus, and the other impassable, five and a half inches from the meatus. The posterior stricture was operated upon by the perineal section, and then, after incision of the meatus, the anterior stricture was ruptured by Voillemier's instrument. No. 11 English passed easily. Had no chill. Made a good recovery. I have recently learnt that this man neglected to pass a sound, and, as the stricture began to contract, it was again ruptured a few months since.

Case X. J. R. February, 1875. Rhode Island Hospital. As nearly as could be ascertained a stricture had existed for eight years, during the most of which time the stream was not larger than a knitting-needle. Three or four weeks before admission to the hospital, the patient

fell across a bar, striking the perinæum. An abscess formed, resulting in two fistulous openings. There are two strictures, one three inches from the meatus, admitting No. 3 olivary bougie, the other five and a half inches from the meatus, and impassable. The fistulous openings are to the right of the median line, midway between the scrotum and anus. A tunneled sound was passed down to the posterior stricture, and the perineal section was made. The meatus was incised and the anterior stricture ruptured with Voillemier's instrument. No. 12 English passed easily into the bladder. The fistulous tracts were laid open in a large part of their extent. A large-sized catheter was left in for twenty-four hours. The patient had a chill on the night of the operation, and a slight attack of urethral fever, but made an excellent recovery. Some months after, this man had a severe illness which was probably pleuro-pneumonia, and for three months no instrument was passed. He then found that the stream was much smaller, and as he observed that the stream continued to diminish he again entered the hospital in January, 1876. (Case XI.) I then found that a large sound encountered an obstruction at five and a half inches from the meatus. No. 3 olivary bougie entered the bladder. The stricture was half an inch in length, and a small fistulous opening had formed in the track of the wound. I introduced a whalebone guide, and over it Thompson's divulsor, expanding it in the stricture to nearly its entire extent. A large No. 12 passed easily into the bladder. The patient had no chill, and made a rapid recovery. The water ceased running through the fistula. He left, determined not to neglect his instrument again.

Case XII. B. L. February, 1875. Rhode Island Hospital. Had gonorrhœa five years ago. A stricture of four years' standing is found at five inches from the meatus, and admits No. 2 bulbous bougie. Ruptured with Voillemier's instrument. No. 12 English passed easily. Had no chill, made an excellent recovery. A year afterwards he had had no return and experienced no trouble, although he had never passed an instrument.

Case XIII. W. H. C. December, 1875. Eight years since fell upon a beam, striking the perinæum with great force. Passed no water for forty-eight hours, and then nearly all that passed was blood. No instrument was introduced. Three or four days afterwards, while lifting, a large quantity of blood came from the urethra. For a long time the water leaked away more or less. About a year after the accident, the stream was noticeably smaller than usual and was diminishing. A year previous to my examination a swelling occurred in the perinæum resulting in an abscess, which was opened, but through which at that time no urine found its escape. Subsequently fistulous openings formed on both sides of the perinæum. At the time of my examination I found a stricture six inches from the meatus through which I

could only pass a whalebone guide bent at an angle. There was a second stricture three inches from the meatus which would admit a No. 5 elastic bougie. I attributed this anterior stricture to gonorrhœal origin, but the patient positively denied any such source. A tunneled sound of smallest calibre could not be made to engage in the posterior stricture, and I therefore performed the perineal section upon the whalebone guide alone. The tissues were hardened and almost cartilaginous. After the urethra was opened, Gouley's grooved probe was passed through the stricture, and with his beaked knife it was thoroughly divided. The fistulous tracts were laid open to a large extent. The meatus was then incised, and the anterior stricture was ruptured with Thompson's divulsor. No. 27 French passed easily into the bladder. This patient had no chill and no urethral fever, and was making very favorable progress, when, four weeks after the operation, he was seized with partial paralysis of the lower limbs and complete paralysis of the bladder. The wound healed entirely and he regained control of the bladder. He passes a No. 14 English elastic bougie. The paralysis of the limbs is gradually disappearing under electrical treatment in the hands of Dr. W. F. Hutchinson. The disease of the bladder, consequent upon the long-standing stricture, was possibly the cause of the paralysis. That the latter manifestation should have appeared when the former was on the road to recovery was a fortuitous circumstance, and was alike singular and unfortunate.

Case XIV. W. H. S. January 6, 1876. Rhode Island Hospital. Two strictures, one admitting a No. 3 elastic bougie, two inches and a half from the meatus, and one at five inches from the meatus through which I could not pass any instrument. A tunneled sound was passed down to the stricture and the perineal section performed, as in the last case, with Gouley's knife and dissector. The anterior stricture was ruptured by Voillemier's instrument. No. 12 English was passed with ease. Patient had no chill. Eighteen days after the operation the water ceased to flow through the wound, and on the 15th of February he was entirely well. This man's case was interesting to me because he seems to possess a peculiar recuperative power. Four years before I had performed upon him, in the Rhode Island Hospital, Chopart's amputation for necrosis resulting from an injury to the foot. In two weeks the wound had entirely healed, and he was discharged. At the present time I had the opportunity of seeing an excellent stump which had done him good service ever since. It did not in the slightest degree come under the reproach which is sometimes cast upon this operation, namely, that there is a tendency to contraction of the tendo-Achillis, and consequently a pointing of the stump.

Case XV. H. M. January 29, 1876. Rhode Island Hospital. Had gonorrhœa six or seven years ago. Has noticed that the stream was

getting smaller for the last two years. A year ago an unsuccessful attempt was made by a physician to pass an instrument. On his admission to the hospital there was retention and dribbling of urine. There were two strictures, one two and a half inches from the meatus, admitting No. 4 English, the other five and a half inches, admitting only a filiform bougie. A whalebone guide was passed, and over it Thompson's divulsor; the meatus was also incised. No. 12 English was passed into the bladder. The patient had a chill the night of the operation. For the next ten days he complained a little of pain in his stomach and bowels, and had some fever, but on the whole he was doing fairly well. He did not have control of his bladder, and a catheter was therefore passed twice or three times a day. On the 8th of February, in my presence, when sitting up, after having passed water himself, he was suddenly faint, but on lying down and by the use of restoratives he quickly came to himself. Ten minutes afterwards, and while still reclining, he again became unconscious, and immediately expired. I attributed his death to embolism, although none was found at an examination subsequently made. It revealed however extensive disease of the kidneys, the cortical portion being greatly diminished with marked dilatation of the pelves and ureters, and with hypertrophy of the wall of the bladder. With such a condition one would hardly wish to operate, but still it seemed imperative.

To sum up these cases, of the fifteen, there were two deaths, one after the passage of an instrument without operation, and one suddenly, ten days after rupture. There were five perineal sections, three of which were accompanied by fistulæ; three were in cases presenting an anterior stricture which was ruptured, and three of the five were of traumatic origin. Case XIV. claimed that the anterior stricture was of traumatic origin and the posterior from gonorrhœa; I, however, do not include this among the three mentioned above. There were two strictures in seven out of the fifteen cases, and these illustrate the general rule on this subject: where there is but one stricture it is more likely to be located from five to seven inches from the meatus; where there are two the second is most likely to be from two and one half to four inches from the meatus, and the anterior will be of larger calibre than the posterior. Of the fifteen cases in six only was the operation followed by a chill, and in three of these six there were no further indications of urethral fever. I attribute this exemption to the almost uniform practice of administering a large dose of quinine and morphine as soon as the patient comes out of the ether, and to putting him to bed in blankets.

In some of these cases I pursued a practice of which I did not altogether approve, and that is, leaving in a catheter after the operation. I believe it to be unnecessary, but I did not find any evil effects from it.

As to the different instruments used I am inclined to prefer Thompson's divulsor, as it produces the greatest dilatation at the point where it is most needed. In conclusion, I may say that so far as my experience goes, I see no reason for preferring the slow and tedious process of gradual dilatation to the more rapid measures, and in all cases of traumatic stricture, or of stricture complicated with fistulæ, I believe the perineal section affords the most satisfactory results.

TWO CASES OF STRICTURE OF THE URETHRA.[1]

BY J. FOSTER BUSH, M. D. HARV.

CASE I. The patient, a man aged thirty-nine, has the following history. When twenty-five years old, in 1860, he contracted gonorrhœa, the symptoms of which, according to his statement, did not come on until six weeks after connection. This urethritis lasted for some three months, and was accompanied by excessively painful chordee. Injections were the chief remedies used. Upon getting fatigued or upon exposure to cold and damp a slight discharge would again come on, not enough to cause alarm or great discomfort, and no action was taken in the matter until three years later, when, having serious trouble in micturating, he consulted a physician, who upon examination detected a stricture in the membranous portion of the urethra. This stricture was divided by the urethrotome; no after-treatment was carried out, and in a short time he was as bad as before, and eighteen months after, in 1865, he was operated upon at Bellevue Hospital, New York. Holt's dilator was used, but, as in the first instance, no after-treatment was followed up, and t is operation also proved unsuccessful, the patient in fact being worse off on account of the increased inflammatory action set up. In 1867, two years later, after repeated attacks of retention and a threatened perineal abscess, he entered the Massachusetts General Hospital, where perineal section was performed, and a No. 8 English catheter was fastened into the bladder. The wound healed quickly and he felt decidedly better, and for a time after leaving the hospital passed the instrument that was furnished him, a bougie; but this getting worn out, he destroyed it and did not replace it with another, as he felt perfectly well and the necessity of passing an instrument continuously had not been enforced upon him. In 1871 and 1872 he lived in Kansas, and while there was perfectly free from urinary trouble. In 1873, upon his return to Boston, he began to have at irregular intervals attacks of cystitis and retention, and to relieve the latter he was instructed how to pass an instrument. He remained in a very uncomfortable condition, at times able to be up at work, and at other times in bed, until 1874, when I

[1] Read before the Boston Society for Medical Observation, April 3, 1876.

saw him. He was then suffering from repeated attacks of retention, which were relieved by morphine and by the passage of a small bougie-catheter. After hearing his history I advised another operation, but, his experience of such proceedings being somewhat more extended and varied than that of most men, he declined. I explained to him that the operation was by no means as important as the after-treatment, and that in order for it to do any good, the passage of an instrument must be carefully and persistently followed up. He desired to see Dr. George H. Gay in consultation. This was done on November 16th, and as Dr. Gay agreed with me that surgical interference of some kind was necessary, the patient gave his consent. Ether was administered and Holt's dilator was used. The stricture was very elastic, giving way before the instrument like India-rubber, and although the largest-sized dilator was used it was with difficulty that a No. 6 English elastic catheter could be passed through into the bladder and fastened in. This catheter was allowed to remain in for forty-eight hours, at which time, there being a slight purulent discharge from the meatus, it was removed. For three days no attempts were made to pass an instrument, thus giving the urethra an opportunity to heal. At the end of this time a No. 10 bougie (French scale) was passed without producing much pain. This was done morning and night for a week, using a larger bougie each day until a No. 17 was used. A nickel-plated steel sound (No. 12) was then made. At first there was great pain upon its introduction, but the urethra soon became accustomed to its presence. At first this sound was passed every day, then every second day, and then only once a week. With the practice the patient had had with soft instruments he was soon able to master the sound, and now he passes it every seventh day. It is now seventeen months that he has used it, and he has become so accustomed to it that it causes him no inconvenience, and he declares that it will not be his fault if the stricture troubles him again.

Case II. The second case is taken, by permission, from the records of the Massachusetts General Hospital, the patient being there while I was surgical interne at that institution. It is one of a series of eight divulsed with Voillemier's dilator by Dr. Hodges, all having more or less the same history, and all having been operated on once at least before entrance, at which time, however, no after-treatment had been carried out. Almost all entered for relief from retention. Some of the cases were of traumatic origin, but most of them followed gonorrhœa. After operation all were furnished with sounds, were instructed how to pass them, and were cautioned particularly about keeping up the practice, being told that a return of the stricture would take place if they neglected it. They were requested to report from time to time, especially if they experienced any trouble. For a year I was able to trace most of them, and they sent good reports. Two of the cases

live in the city, and they keep up the practice and experience no trouble, as I know from a recent examination. Instead of taking the whole eight cases and reporting them at length, I will take the following, which will answer all purposes for illustration of the principle and save tedious repetition.

G. M., aged forty, while on a foraging expedition during the late war, was thrown from a wagon, striking astride one of the wheels, injuring his perinæum quite severely. He was confined at a field hospital for some time, and had an instrument kept in the bladder. Upon resuming his duties he experienced no great trouble until about a year after, when, fording a stream one wet, autumnal day, he became thoroughly chilled and was attacked with retention. As opiates did not produce the desired effect and as an instrument could not be passed, perineal section was performed by the regimental surgeon. The wound was a long time contracting, owing to unfavorable surroundings, and for quite a period he was troubled with a perineal fistula, which, however, subsequently closed. No after-treatment was enforced. Upon his discharge from the army he came North and lived in New Hampshire. Here at times he would be in perfect health, and at others, as is the case with all subjects of stricture, he would be perfectly miserable. Suffice it to say that he continued in this way, losing flesh and strength, and unable to work much. In one attack of retention, his physician not being able to introduce a catheter or to produce the desired effect with morphine, the patient was tapped over the pubes by the aspirator. This was repeated for three successive days, at the end of which time he entered the hospital, being able then to pass a little water at a time. He was etherized upon entrance, and the introduction of an instrument was attempted; although the greatest care and perseverance were used it was found impossible to do this, for although the bougie was firmly held by the stricture it could not be made to go through. Attempts were therefore no longer made, and the patient was put to bed and kept under the influence of morphine given in the form of suppositories. Three days after this attempt another attack of retention came on, which was relieved by morphine hot baths and the pressure of a bougie against the stricture. The next day ether was again administered, and it was decided if a capillary bougie could not be passed to perform perineal section. This time, however, fortune favored the exertions, a filiform bougie was introduced, Voillemier's rupture-instrument was brought into play, the stricture was divulsed, and a No. 12 English elastic catheter was fastened in as usual. This was removed on the second day, and no passage of an instrument was attempted for some time, as the patient suffered from repeated chills, high temperature, frequent micturition, and purulent urine. When this exacerbation of cystitis had subsided, the passage of an instrument was attempted. At first this was

excessively painful, but soon the urethra became accustomed to it, and the patient was able to pass it himself. He was furnished with a nickel-plated steel sound (English No. 12), was cautioned to keep up the practice, and was sent on his way rejoicing. I heard from him a short time ago. He still uses the sound occasionally, and enjoys excellent health.

These cases are reported simply to illustrate what is already a well-recognized fact, which all the authorities, save Dr. Otis, state in the same emphatic manner. These and many more similar cases from hospital records show a point upon which sufficient stress is not laid, namely, that the operation for stricture of the urethra does no good unless the after-treatment, the continual passage of a sound or bougie, is faithfully carried out, and that if we are not watchful in so doing, the inflammatory action will again get the upper hand and will make the case as bad if not worse than before. The first of these cases shows this particularly well, for previous to the last operation, when this principle was carried out, the patient had had the stricture cut from the inside by the urethrotome, from the outside by perineal section, and had had it divulsed, with always the same unfavorable result. In the second case this passage of an instrument ought to have been particularly enforced upon the patient at the time of the first operation, for his stricture was of traumatic origin, and, owing to its more extended character, it was more likely to contract. Concerning cases of this kind Van Buren and Keyes, in their Genito-Urinary Surgery, say: "Traumatic strictures are particularly liable to be sensitive, irritable, and resilient, and usually require harsher means of treatment than ordinary dilatation and the employment of more persistent and intelligent measures to prevent recontraction afterwards than most strictures from other causes. Hence the imperative importance in these cases of insisting upon an intelligent use of the full-sized steel sound, by the patient himself, for an indefinite period of time after a cure, generally for the remainder of life; a task certainly irksome and disagreeable, but no more so and no less necessary than a truss to the ruptured, spectacles to the weak-sighted, an artificial leg to replace the amputated one, and certainly more necessary and less irksome than the daily use of the razor."

RECENT PROGRESS IN GENITO-URINARY SURGERY.

BY THOMAS B. CURTIS, M. D.

The Treatment of Advanced Prostatic Disease. — A year ago Sir H. Thompson's procedure for the relief of patients suffering from prostatic hypertrophy which has arrived at its last stage, with retention of urine, cystitis, and diminished capacity of the bladder, was described in this report.[1] It consists in the introduction into the bladder, above the

[1] Boston Medical and Surgical Journal, December 30, 1875, page 766.

pubes, of a curved canula, resembling that used after tracheotomy, the object being to provide a permanent opening for the exit of urine, and thus to supersede the necessity of the frequent use of the catheter to empty the bladder. Professor Dittel [1] questions the originality of Sir H. Thompson's procedure, on the ground that the supra-pubic puncture, with or without the preliminary incision, in cases of retention of urine, is an old operation. He says that he is surprised that Sir H. Thompson should "have expressed the opinion that the supra-pubic puncture had not hitherto been resorted to on the Continent for obstruction of the urethra caused by hypertrophy of the prostate." Sir H. Thompson only expressed the belief "that puncture has never been done or recommended with this end in view, namely, to avert death by establishing a *permanent* outlet for urine when the urethra is no longer practicable through disease of the prostate and bladder." [2] Thompson's claim of originality for this operation, which is practiced upon a nearly empty, contracted, and perhaps inextensible bladder, for the permanent relief of obstructive prostatic disease, does not seem to be wholly invalidated by the fact that Dittel and others have often tapped the full bladder above the pubes for the momentary relief of retention, caused by hypertrophied prostate or by stricture. Whatever may be the merits of this comparatively unimportant question of priority, the operation is acknowledged by Dittel to be a useful one. He too, in certain cases, advocates the insertion of an inlying tube above the pubes, to be permanently worn as an outlet for the urine. His way of proceeding differs, however, from that recommended by Sir H. Thompson; the operation described by the latter resembles the high operation for stone rather than the ordinary supra-pubic puncture, inasmuch as he incises the abdominal wall immediately above the pubes with the bistoury, and then opens the bladder on the end of a sort of blunt *sonde à dard*, previously introduced through the urethra into the empty and contracted organ. Professor Dittel claims that he attains the same object in a much simpler way. Having anæsthetized his patient, he forcibly distends the bladder with water, unless it should be capable of being filled by allowing the urine to accumulate. For this purpose he injects sometimes as much as forty ounces of water. He then punctures the bladder just above the pubes with an ordinary trocar, leaving the canula in the bladder during four, five, or six days. At the end of this lapse of time, the parts traversed by the canula having become consolidated, a tubular tract is formed, through which, on removal of the canula, a soft rubber catheter can readily be passed into the bladder. This is permanently secured in place by means of a perforated plate of hard

[1] Wiener medizinische Wochenschrift, 1876, Nos. 22, 23, 24.

[2] Sir H. Thompson, Clinical Lectures on Diseases of the Urinary Organs, London, 1876, page 318.

rubber, through the central opening of which the catheter protrudes, being fastened to the margins of the orifice by means of a pin; the plate itself is kept in place by a belt, the extremities of which are fastened to the ends of the plate. Such an apparatus is, however, not indispensable, as means of retention can easily be improvised in various ways, the simplest consisting in the use of a long pin which traverses the catheter transversely at its point of evergence above the pubes, and across the ends of which strips of adhesive plaster are placed.

Professor Dittel takes Saucin to task for asserting that the old-fashioned puncture of the bladder, with the ordinary trocar and canula, must be considered as a superfluous and objectionable procedure, inasmuch as the same object can be attained in a simple and safe way by the use of the aspirator. Dittel admits that the capillary puncture of the bladder may be serviceable as a temporary expedient in cases of acute retention, where the reëstablishment of the urethral route may be looked for; but what, he says, can such trifling avail against a retention which is due to an irremovable cause?

The Curative Treatment of Hypertrophy of the Prostate. — Professor Dittel of Vienna has made trial of the treatment recently recommended by Professor Heine of Innsbrück,[1] consisting in injections of a solution of iodine into the parenchyma of the gland. The results as described by Dr. B. Howard[2] were exceedingly unsatisfactory. "The patient entered Professor Dittel's wards the 21st of last November with simple hypertrophy of the prostate, was easily relieved by the catheter, and was otherwise in good condition. The case was thought to be a good one for the method in question. Accordingly the solution as recommended by Heine, containing pot. iod. ʒij., tinct. iod. ʒiij., aq. dest. ʒij., was prepared, and four drops of it, at two different times and a few days apart, were injected into the body of the prostate. No irritation or reaction followed immediately, but before the time for the third injection inflammatory symptoms showed themselves. Fluctuation was afterwards detected in the prostate, and the abscess was opened. The inflammation continued to increase and spread; peri-prostatitis, peri-urethritis, and peri-urethritic abscess supervened, peri-proctitis bringing up the rear of this long, unpleasant train. On the 13th of January it became necessary to perform supra-pubic puncture of the bladder, which afforded not only temporary relief, but induced considerable general improvement, never enough, however, to allow the supra-pubic route to be dispensed with. The battle was fought with bravery and great patience by both surgeon and patient; there was certainly not another case in all the wards, the management of which was so troublesome and tedious. The patient gradually sank

[1] Langenbeck's Archiv, Bd. xv., p. 88; and Bd. xvi., p. 79.

[2] The New York Medical Record, October 21, 1876.

under his many complications, however, and on the 10th of July he died. On examining the prostate I found the seat of two old abscesses corresponding to the points where the injections had been made. The other lesions were recorded as 'suppurative prostatitis, peri-prostatitis, cystitis, pyelitis, and nephritis.' I am informed that in the other instances also in which Professor Dittel has tried this method, abscesses have resulted."

Injecting the Male Bladder without a Catheter. — It has been shown by Professor Zeissl [1] of Vienna, and by Professor McGuire [2] of Richmond, Va., that the male bladder can be injected through the channel of the urethra, without the aid of a catheter. This method is especially useful in cases where pain, increased cystitis or urethral fever are likely to be occasioned by the repeated use of a catheter. Injections can be practiced in several ways; either with the ordinary rubber-bag syringe, with the apparatus devised by Dr. E. L. Keyes, of New York, or with any irrigator. Zeissl's procedure is as follows: The patient is placed on his back with the pelvis raised, and the penis is extended on the belly and somewhat stretched, so as to straighten out the urethra. The extremity of the escape-tube of the injecting apparatus, which consists of a bag or vessel filled with warm water, is then introduced through the meatus, and the vessel is raised several feet above the level of the patient's body. In a few seconds, or minutes, the patient feels that the fluid is penetrating into the bladder, the resistance of the urethral walls and of the sphincter being gradually overcome by the pressure of the column of water. Professor McGuire "takes the rubber-bag syringe, ordinarily used to inject the bladder through a catheter, the nozzle of which is provided with a stop-cock, and tapers to a point. The bag is filled with warm water, all the air being carefully excluded, and the nozzle is oiled and introduced into the urethra for an inch or an inch and a half. The urethra is then gently compressed around the nozzle of the syringe, the stop-cock turned, and, by gentle and continuous pressure on the bag, the water is forced along the urethra into the cavity of the bladder. It is important to avoid all rough manipulation, and to inject the fluid slowly; with a little practice the patient can perform the operation quite readily himself."

Urethral Stricture and its Treatment. — An important discussion [3] took place in February, 1876, before the Medical Society of the county of New York, in which Dr. H. B. Sands, Dr. F. N. Otis, Dr. R. F. Weir, Dr. J. F. Bumstead, and Dr. E. L. Keyes took part, the subject being certain views relating to stricture which during the last few years

[1] Lyon Médical, April 2, 1876. Practitioner, August, 1876. Prof. S. D. Gross, On the Urinary Organs, Philadelphia, 1876, page 52. Prager Vierteljahrsschrift, Bd. ii., 1875, page 62.

[2] The Lancet, October 21, 1876.

[3] New York Medical Record, March 11, 1876.

have been urged by Dr. Otis,[1] with great vigor, perseverance, and ingenuity.

Dr. Otis has shown that the normal urethra is wider than had been generally admitted before the results of his investigations were made known. One hundred urethræ, measured with his urethra-meter, gave an average calibre of 32.95 F. Occasionally urethræ are found exceeding 40 F. Moreover, Dr. Otis asserts that a constant relation appears to exist between the urethral calibre and the size of the penis. This is a fact which he claims to have demonstrated by careful measurements made with the urethra-meter in several hundred cases, without exception being met. The proportion runs as follows: when the flaccid penis measures 3 inches in circumference, the size of the urethra will be 30 millimetres in circumference or more; when it is 3¼ inches, it will be 32, or more; 3½ inches, 34; 3¾ inches, 36; 4 inches, 38; 4¼ to 4½ inches, 40 or more millimetres.

Such being his views of the normal calibre of the urethra, Dr. Otis asserts that any diminution, however slight, of the full normal calibre as above estimated, is a stricture requiring surgical treatment. "If," he says, "a urethra presents, the normal calibre of which is equal to a circumference of thirty millimetres of the French scale, and only twenty-nine of bulbous sound will pass without detecting obstruction, then the urethra is not 'about right.' It is strictured to the extent of one millimetre in circumference and can never be a healthy urethra while that stricture remains." Dr. Otis says that stricture is most frequent in the first inch from the meatus, and is less frequent as the distance from the entry increases. He also affirms that gleet is always dependent upon stricture, the latter being always present when gleet is present. With regard to treatment, he asserts that dilatation is at best but a temporary expedient, and that stricture as ordinarily met with is absolutely within the reach of curative measures; that, if completely divided and this division is maintained by suitable means until healing of the parts has occurred, no recontraction can ever take place. He claims that, by this treatment, the complete absorption of the stricture tissue is brought about.

Dr. Otis also entertains views of his own in relation to the meatus, which, he says, is normally as wide as the rest of the canal, and is often, by consequence of contraction, congenital or acquired, the cause of serious urinary trouble. We find, says Dr. Otis, that various and grave difficulties and diseases are occasionally associated with a genito-urinary apparatus where the meatus is not of the full size of the urethra behind it, and that such difficulties are often promptly relieved by a surgical procedure which permanently enlarges the meatus to that size.

[1] York Medical Journal, April, 1874. Ibid., April, 1876. British Medical Journal, 26, 1876. The Lancet, June 3 and 10, 1876. Also paper on Stricture of the Male its Radical Cure. New York, 1875.

Special instruments have been devised by Dr. Otis for measuring and exploring (the urethra-meter), and for incising (the dilating urethrotome) the urethra, when it is judged necessary. In accordance with his views of calibre and of stricture, Dr. Otis found and incised in one case as many as fourteen strictures. In another case, he performed internal urethrotomy four times, in a urethra through which Voillemier's largest shaft (No. 32) had been rapidly and repeatedly driven. In yet another case [1] in which a No. 34 steel sound could easily be passed without the least force or halting through the urethra and into the bladder, a contraction of the value of six millimetres was revealed by the urethra-meter within one inch of the meatus, the normal calibre in this case being 40, according to Dr. Otis. This "contraction" he wished to divide, but the patient declined the operation, and dilatation was practiced up to No. 40, with relief to the symptoms. These are exceptional cases, showing to what extremities Dr. Otis's views lead.

These opinions and assertions, which have been several years before the profession, were attacked by Dr. H. B. Sands.[2] Speaking first with regard to gleet, he defined the term as signifying "an imperfectly cured or chronic gonorrhœa," and he justly remarked that there is no very clear line of demarkation between gleet and its parent disease. He admits that gleet will often be found to be dependent upon a stricture of the urethra, but he denies that this is the sole cause of the disease, being of the opinion that there are various other causes which suffice to keep up the chronic inflammation of the urethral mucous membrane.

Dr. Sands has investigated the calibre of the urethra with Dr. Otis's urethra-meter, but his results do not accord with those of the inventor of the instrument. "I can discover with it," he says, "no exact ratio between the calibre of the bulb of the urethra, and the circumference of the penis." He further calls attention to the want of uniformity in calibre of different parts of the same urethra, the bulb being the widest or most dilatable part of the canal. "If," he continues, "the calibre of the bulb of the urethra is taken as an indication of what the calibre of all parts of the canal in front of it *ought* to be, I cannot understand why stricture will not frequently be diagnosticated when none really exists. And when it is remembered that not less than fourteen strictures in the same urethra have been supposed to be revealed by this mode of examination, we may reasonably suspect, in the absence of post-mortem evidence, that there is something fallacious in the method employed. In fact, I am convinced that, when a healthy urethra, which has not been previously stretched, is explored either with the urethra-meter or with very large bulbous sounds, the instrument will

[1] Archives of Dermatology, vol. i., No. 3.
[2] New York Medical Journal, March, 1876.

often be tightly grasped at certain points, and communicate to the examiner a deceptive sensation, as if a stricture were present. This may possibly arrive from one of several causes, as for example, a deviation of the sound from the axis of the canal, a spasmodic contraction of the muscular fibres that surround the urethra, or a puckering of its mucous membrane before the instrument. Another explanation is suggested by certain interesting appearances in the urethral casts which I have just exhibited. Instead of presenting a smooth and even surface, they are often marked by slight transverse furrows and alternating ridges, indicating that the urethral mucous membrane, when greatly distended, yields more readily at some points than at others." Sir H. Thompson[1] has recently drawn attention to the fact that the bulbous-ended explorers are very liable to deceive, leading the user to find stricture where none exists. In one of Dr. Otis's cases,[2] a No. 17 F. bulbous sound was "distinctly arrested at the points of stricture," while a No. 25 steel sound could be easily and freely passed through the urethra into the bladder. Dr. Otis called the attention of the society to "the interesting and important fact here demonstrated, that while the bulbous sound No. 17 F. defined the strictures distinctly, No. 25 F. steel sound failed to give any evidence of their presence." The question now arises which instrument deserves most to be trusted.

Dr. Robert F. Weir[3] followed Dr. Sands in the discussion, after the latter had been answered by Dr. Otis, and showed that several of the older authors, namely, Ducamp, Civiale, Reybard, Richet, and others, were acquainted with the great distensibility of the urethra, but nevertheless agree in fixing at a comparatively low figure (21 to 27 F.) the calibre to be regarded as a limit in the treatment of stricture.

"In respect to the treatment of gleet from strictures of large calibre," says Dr. Weir, "the risks from hæmorrhage, urinary fever, abscess, and the more or less permanent curvature of the penis, which is sometimes sufficient to prevent coitus, have always seemed to me to be too great to be lightly resorted to, and especially do I feel convinced on this point since some observations, begun in 1873 and recently resumed, have furnished stronger reasons for this adverse conviction." The same cicatricial curvature of the penis took place in a case which was operated by Dr. Otis in the wards of Mr. Berkeley Hill,[4] of University College Hospital, London, and Dr. Otis admits that out of five or six hundred operations he has seen six cases followed by the crook or curvature described by Mr. Hill, in the worst case persisting about a year. Dr. Otis attributes this result to inflammatory trouble

[1] Clinical Lectures on Diseases of the Urinary Organs, 1876, page 43.
[2] New York Medical Journal, April, 1874.
[3] New York Medical Journal, April, 1876.
[4] The Lancet, April 8, 1876. A Clinical Lecture on the Treatment of Incipient Stricture by Otis's Operation. By Mr. Berkeley Hill.

succeeding the operation, and calls attention to the fact, not stated by Mr. Hill, that the patient operated by himself in Mr. Hill's wards was allowed to leave the hospital and walk several miles after the operation.

Dr. Weir also throws doubt upon the trustworthiness of the indications of stricture afforded by the *bougie à boule*, and quotes Dr. B. W. Richardson, of Dublin, to the effect that it is a deceptive urethral explorer, the use of which may lead to the supposition of the presence of a stricture where none exists. Dr. Weir is therefore of opinion that, inasmuch as certain apparent strictures are really normal contractions, statistics based upon their non-returna fter division must of necessity not apply to the question of a radical cure of stricture. Without denying the existence of veritable strictures of large calibre, he thinks that our mode of detection of such strictures is as yet imperfect.

Dr. Bumstead, speaking first with reference to gleet and organic stricture, expressed a doubt whether the former invariably depended upon the latter. He advocated urethrotomy as being the best means of treatment for the cure of stricture, having discarded Holt's operation in its favor; moreover, he believed that the operation, when carried to a considerable extent, has, in his hands, been productive of better results than when carried to a lower degree. During the last two or three years it has been his custom to cut up to 35 and 40 F., and the tendency to contract has been much less than before. The same may be said with regard to the habitual use of very large sounds. With respect to slitting up the meatus he was of the belief that it was done altogether too much, as well as cutting the urethra elsewhere, especially by the inexperienced. But he had seen no ill results from slitting the meatus, and did not hesitate to resort to the operation if necessary to effect the passage of an instrument.

Dr. G. A. Peters made some remarks which were rather in support of Dr. Otis's views, and Dr. E. L. Keyes spoke adversely to them.

Mr. Berkeley Hill,[1] in a clinical lecture on the treatment of incipient stricture by Otis's operation, instructs his hearers to avoid the use of instruments in all cases where the gleety discharge is not of long standing, and has not exceeded six months in duration.

Treatment of Gonorrhœa. — Dr. Diday,[2] of Lyons, in a work which he says is the "fruit, now ripe, of thirty years of study and experience, sets forth the rules which, according to him, should guide the practitioner in the treatment of gonorrhœa. His opinions upon this subject, if not marked by novelty, nevertheless appear worthy of attention on account of his great experience in venereal disease; we therefore give an

[1] The Lancet, April 8, 1876.

[2] Thérapeutique des Maladies Vénériennes et des Maladies Cutanées. P. Diday et A. Doyon. Paris. 1876.

abstract of his precepts. He divides the ordinary course of gonorrhœa into four stages, comprising: a first stage of very short duration, during which the disease may, in certain cases, be made to abort; a second "irrepressible" stage, which commences about the third day, and lasts from four to six weeks, or longer; a third stage, called "repressible," which is marked by symptoms announcing the "maturation" of the discharge; and a fourth, "chronic" stage, in which the disease becomes stationary.

(1.) First stage: characterized by a feeling of warmth during micturition perceived about two and a half days after exposure, and by the appearance of a drop of semi-transparent discharge at the meatus. If at this moment an attempt is made to jugulate the disease success is "possible, and in fact very probable," while, on the other hand, such an attempt, if unsuccessful, involves no harmful consequences. The procedure recommended is an injection of a solution of nitrate of silver, one part in ninety, to be administered by the surgeon. About one drachm of the solution should be injected, the contact of the liquid being limited to the first two inches of the canal, and maintained during five minutes. An hour or two after this injection an artificial urethritis, marked by a thick discharge with scalding during micturition, sets in, and lasts one or two days. In successful cases the discharge then wholly disappears. Failure, on the other hand, is announced after a day or two of apparent cure by the appearance of a purulent secretion, which grows daily more abundant. After such a failure a second attempt at jugulation offers little or no prospect of success. If, however, the discharge has not yet become thickly purulent, with red and swollen meatus, another trial may be made, two injections, each of a duration of five minutes, being made with the same solution as before.

(2.) Irrepressible stage: when the discharge is over three days old, when it amounts to an hourly drop, when pain attends micturition or erection, when the lips of the meatus are red and shiny, all attempts to suppress the disease are for the time being useless and mischievous; useless, because the discharge can only be temporarily suppressed whatever means be used; mischievous, because the drugs upon which we rely, copaiba and cubebs, lose their efficacy by repeated administration, so that, when the time at last arrives at which the disease is amenable to curative treatment, they are liable to fail, unless the susceptibility of the patient to their influence has been economized in view of the third or "repressible" stage. The secret of success in treating gonorrhœa, says Diday, lies in patient expectation throughout this second stage, such expectation being disguised by various *placebos* (demulcent drinks, warm baths, etc.), and supplemented by certain hygienic precautions (abstinence from ale, beer, white wines, spirits; moderation in use of red wines, coffee, spices; avoidance of conjunctival inoculation, and the use of a suspensory bandage).

(3.) Repressible stage: this stage is attained gradually after a mean duration of five or six weeks, sometimes less, very often longer. Not unfrequently two and a half to three months elapse before it is reached. The signs by which its advent is recognized are: the almost entire absence of pain during micturition and erection; the disappearance of the red and swollen condition of the meatus; a considerable diminution of the discharge, which should be no longer yellow or green, but whitish and viscid. This condition being attained, a suppressive medication may be instituted with good prospects of success. Diday's favorite remedy is the *opiat* of copaiba and cubebs. Properly administered, in suitable doses, this drug should, in the course of less than a week, cause the discharge to cease. The administration should be continued during a second week, to prevent recurrence. In many cases, however, some of the many conditions of success being absent or incompletely fulfilled, the discharge still persists after the sixth day. In such case, should the surgeon persist, or should he adjourn his attempts to repress the the disease? If the discharge, though diminished to a half or a quarter of the previous amount, is still yellow, making sharply defined spots on the linen, and if the meatus is still red and shiny, if there is still smarting in the urethra, it is better to adjourn, rather than continue, the suppressive medication. Should the results of the first week of treatment, on the other hand, be more favorable, there is promise of a permanent cure being attained by perseverance in the use of the remedy; and Diday advises that the dose of copaiba be increased to the verge of tolerance, together with the use of an astringent injection.

(4.) Stationary stage: this last and chronic stage is the final result of untreated or maltreated gonorrhœa, ill-directed and *inopportune* attempts at early suppression being the usual antecedent in such cases. There is little or no pain; the discharge is of small amount; the disease has become refractory to the use of copaiba and cubebs; and it readily becomes subacute under the influence of irritating agencies. In such cases the main reliance lies in the use of injections, that of Ricord, prescribed as follows, being preferred by Diday: —

℞	Zinci sulphatis	grs. viii.
	Plumbi acetatis	grs. xvi.
	Tincturæ opii,	
	Tincturæ catechu	ää ʒss.
	Aquæ destillatæ	ʒix. M.

S. Three injections daily.

Copaiba is no longer useful unless there still remain some traces of acuity, and then only after abstinence from the use of the drug during at least six weeks.

BARTHOLOW'S MATERIA MEDICA AND THERAPEUTICS.[1]

In presenting a new treatise on the above subject, the author claims that his personal observation derived from experimental and clinical study give him the right to publish a new work on the action of medicines, and we must own that his attractive and concise method of generalizing the results of modern literature on this subject add much to the value of his labors. Throwing aside the restraint of the older classifications of remedies, such as the sedatives, irritants, stimulants, astringents, etc., which have been adopted by many writers, he offers an entirely new scheme. He also refers his readers to the United States Pharmacopœia for pharmaceutical information, and to the Wood and Bache Dispensatory for botanical and chemical details of materia medica, which he says "are more the province of the druggist than of the physician." Moreover, he states that "the most certain acquisitions of therapeutical knowledge must come through the physiological method," and "that well-established empirical facts should not be omitted, even if they are not explicable by any of the well-known physiological properties of the remedies under discussion."

By the omission of the botanical, chemical, and pharmaceutical details Dr. Bartholow can present the physiological and therapeutical questions of the materia medica in a direct and forcible manner, and the reader can devote his attention to them without confusion. Yet we would not advise our medical students to read or study his work without preliminary education in the elements of materia medica, as derived from an acquaintance with their physical and chemical properties, and with that part of pharmacy which relates to the compounding of prescriptions, as well as to the preparation of the medicines which are described in the pharmacopœia.

Part first treats of the modes in which medicines are introduced into the organism.

In part second the actions and uses of remedial agents are classified as those used to promote: (1.) Constructive metamorphosis, (2.) destructive metamorphosis; those which modify the functions of the nervous system, and those which cause evacuation from the body. It is somewhat a matter of surprise that Dr. Bartholow omits to classify those agents which effect the central and peripheral circulation of blood. It would seem as if this important field of physiology had no separate place in his physiological scheme. Certainly the position it occupies in the department of physiology hardly warrants the omission.

The brief but comprehensive description of the methods of medicinal administration is admirably suited to the wants of the medical student and young practitioner, especially when it is compared with the lengthy and confused treatment of the subject pursued by other writers.

Dr. Bartholow rightly, we think, introduces the alimentary substances as remedial agents; in fact he could hardly do otherwise, if he would treat of constructive metamorphosis. Water is classified as a restorative agent, and we are pleased to see such sensible views in regard to its abuse, which produces im-

[1] *A Practical Treatise on Materia Medica and Therapeutics.* By ROBERTS BARTHOLOW, M. A., M. D., etc. New York: D. Appleton & Co. 1876.

pairment of the digestive organs and "*ice-water dyspepsia*, a very common malady in the United States." The succinct way in which the author has summarized the therapeutical applications of water, as an internal and external remedial agent, is most excellent, and deserves to be read by every practitioner of medicine. There is no discussion as to its merits in any specified disease, but simply a description of the effects on certain symptoms which may be met with in many diseases, and advice is given as to when the use of the bath promises most.

On first thought we may be somewhat surprised to find pepsine spoken of as an aid to constructive metamorphosis, but on reflection its place as a restorative agent cannot be disputed. We cannot but admire the concise and intelligent explanation of the value of cod-liver oil as a restorative agent and promoter of constructive metamorphosis, and the cautious statement that "the remedy is too often prescribed without any reference to the condition of the patient's digestive functions."

These and similar expressions of individual opinion strengthen our confidence in recommending this treatise to the younger practitioner of medicine, for he would not be so likely to glean from other text-books so many practical *hints* in the treatment of ordinary disease. The older practitioners might, and perhaps with good reason, question the validity of the theories of the action of certain remedies; but if we consider theories simply as working formulæ for the solution of disease symptoms, no one can object to their maintenance so long as they seem correctly based; and it must surely be admitted that the treatment of diseases by the theoretical *modus operandi* of drugs will speedily determine the fallacies inherent in the theory, and will not hinder the recovery from those diseases. The method of unwise treatment of symptoms most assuredly masks the history of the various diseases, and may delay natural recovery.

To illustrate the fact that Dr. Bartholow has not sacrificed his subject by his succinct statement, we would adduce what he says in regard to the indications for the use of tannic and gallic acid on page 223.

The young practitioner of medicine may be well pleased with the numerous prescriptions which occur in the text.

We cannot attempt, in the space allotted us, to criticise Dr. Bartholow's volume in detail. Its method is so different from other and older text-books that the freshness makes its reading very attractive, and the style, while very positive in statement, is very intelligible. For illustration, let any one whose mind has been too often confused by the detailed explanation of medical electricity met with in specific treatises, read the thirteen pages on this subject by our author. In a few words he explains the origin of electrical phenomena from chemical action, the positive and negative currents, the closed and open circuit, and the resistance of the circuit. While on this part of his book we cannot refrain from commending Dr. Bartholow for leaving off the record the details of his electrical experiments on the brain of a woman exposed by an epithelioma, and for his avoidance of a discussion in regard to the electric excitability of the cerebral hemispheres, which is at present an open question.

We will close our review of this work by a description of the method of

arrangement for each drug. First, the name of the drug is given, and then follow its various pharmaceutical preparations and chemical compounds; second, its composition; third, its administration; fourth, its antagonists and incompatibles; fifth, what are called its synergists; sixth, its physiological actions; seventh, its therapy; and last, the authorities to which the writer refers.

We would call attention to the brief classification which Dr. Bartholow gives to the various well-known natural spring waters of our own and foreign countries. A.

FAGGE'S CATALOGUE OF MODELS OF DISEASES OF THE SKIN.[1]

THE author of this interesting volume, well known as the translator in part of Hebra's work for the Sydenham Society and through other valuable contributions to dermatology, has been curator of Guy's Museum for three years. During this period he has been rearranging the very large collection of models of cutaneous affections in its possession and preparing this catalogue. The matter of the arrangement of the specimens, or in other words the system of classification to be thus illustrated, was a difficult problem, which Dr. Fagge has not attempted to solve upon a scientific basis; indeed, he believes such an arrangement to be an impossibility. He has contented himself, therefore, with dividing the diseases into what appear to be natural groups: the inflammatory affections; the non-inflammatory diseases without destructive tendencies; the same with destructive tendencies; affections of the appendages and glands of the skin; and parasitic diseases. The volume contains, in addition to the very full descriptions of the specimens (537 in number), the clinical histories of a large portion of the cases they represent, and brief but valuable observations upon the nature of the various affections in their order, which together make up an admirable treatise on modern dermatology.

FOX'S EPITOME OF SKIN DISEASES.[2]

THIS little book, a brief epitome of the large and well known work of the senior author, is meant to be a sort of pocket-book for ready reference for student and practitioner. It contains, first: introductory observations on the nature and causes of skin diseases; a description of the various cutaneous lesions and a so-called diagnostic chart; a system of classification; and general remarks on diagnosis and treatment; and, second: condensed descriptions of all affections of the skin, alphabetically arranged with directions for their treatment by references to a table of formulæ, which makes up part third of the volume.

The book has been well prepared and contains in a concentrated form a

[1] *Catalogue of the Models of Diseases of the Skin in the Museum of Guy's Hospital.* By C. HILTON FAGGE, M. D. London: J. & A. Churchill. 1876. Pp. 269.

[2] *Epitome of Skin Diseases.* By TILBURY FOX, M. D., F. R. C. P., and T. C. FOX, M. R. C. S. Philadelphia: Henry C. Lea. 1876. Pp. 120.

great deal of essential and practical matter, but its legitimate sphere of usefulness must be a narrow one. As a work of instruction it can be of service to those only who are already fully educated in dermatology; it cannot, therefore, take the place of the text-book in the hands of the student. Its greatest demand will naturally be among those busy practitioners who like to get immediately at what they call the practical kernel of a subject.

PROCEEDINGS OF THE SUFFOLK DISTRICT MEDICAL SOCIETY.

A. L. MASON, M. D., SECRETARY.

OCTOBER 28, 1876. Fifty-seven members were present, DR. WILLIAMS, the president, in the chair. The records of the last meeting were read and accepted.

DR. G. W. GAY showed a specimen of dermoid cyst removed a week before, and gave the history of the case and operation, remarking that it was still rather early to tell what the result would be, though the indications were favorable. The patient was in the City Hospital, isolated as far as possible. In answer to an inquiry by Dr. J. Homans regarding the size of the abdomen, it was stated to be about as large as at the fifth or sixth month of pregnancy.

The case will be published in full at its termination.

DR. JOHN HOMANS showed a patient, a man thirty-four years old, both of whose femoral arteries had been tied for popliteal aneurisms. The right femoral was tied on February 2, 1874,[1] and the left, in January, 1876. The remains of the last aneurism could be still seen and felt in the left popliteal space as a hard, oval tumor, without pulsation, about the size of a large horse-chestnut. The patient worked steadily from March, 1874, until January, 1876, when he was obliged to give up on account of pain and swelling in the left ham and leg. He had detected the aneurism, and presented himself for operation. The pulsating tumor was about the size of a man's fist. No pulsation could be felt in the anterior or posterior tibial arteries, and none was now perceptible in either leg. The first ligature came away on the twenty-first day, and the second on the forty-second. The patient went to work before the last one came away, and has worked steadily ever since. He complains only of numbness in the feet after walking, a symptom which was noticed for a few months after the first operation.

DR. H. O. MARCY reported a case of fracture of the patella, with treatment by a new method. The paper is reserved for publication.

With reference to Dr. Marcy's splint, DR. AYER mentioned the case of a patient, two hundred pounds in weight, whom he had treated with excellent result, some time ago, for fractured patella, by means of a similar apparatus made of wood instead of plaster, the invention of a French surgeon.

Dr. Ayer also spoke of a case of fractured olecranon which he had treated with adhesive plaster applied in the form of a figure eight, and a straight splint with bandages. The splint was removed in twelve weeks, when there

[1] JOURNAL, June 18, 1874, page 589.

was no evidence of separation and every appearance of bony union. In a second case there was entire recovery of the use of the arm in twelve months.

Dr. Marcy reported a case of fracture of the olecranon, occurring in the practice of Dr. Hildreth, in which there was a space of two inches between the fragments. It was treated in a similar manner, by adhesive straps and a plaster-of-Paris splint, with apparently perfect union.

Dr. J. Homans said that he had lately tried plaster-of-Paris bandages in posterior angular curvatures of the spine occurring in Pott's disease, and that he had found Dr. Sayre's method of raising the patients, by means of hooks under the arm and pulleys, too painful. Dr. Homans thought it better to have them raised by attendants, who applied the lifting power to the arms, the back of the head, and the chin.

Dr. Marcy had found a ring attached to adhesive plaster bearing upon the back of the neck and head a satisfactory method. He had used the bandages recommended by Dr. Sayre in twelve cases with very good results, once in the case of a woman who was six months pregnant.

Dr. J. Homans said that he had found it necessary to insert something which might be removed in the region of the stomach to allow for distention after eating.

Dr. Ayer reported a case of pneumonia of the right side which had gone on favorably to convalescence on the eighth day, when the breathing was easy and the cough slight. Delirium tremens then set in, and the patient, who had been in the habit of drinking about a pint of Medford rum daily, died in eighteen hours. Sedative remedies gave no relief.

Dr. Weeks inquired to what extent members of the society had observed interchangeability between erysipelas and puerperal fever, mentioning a case of facial erysipelas which occurred in a newly-delivered woman, in whom there were no signs of any morbid puerperal process.

Dr. W. J. Morton said that at the Cape of Good Hope, in a town of ten thousand inhabitants, there had lately been simultaneous epidemics of erysipelas and of puerperal fever, with many deaths from the latter disease. The connection between the two diseases was not evident, and Dr. Morton had seen two isolated cases of puerperal fever, one fifty and the other sixty miles away from any town, up the River Vaal, and apparently out of reach of any local causes.

Dr. Pattee had observed six cases of labor in houses where there was acute erysipelas. No puerperal fever had followed.

Dr. Morton exhibited a new thermo-cautery invented by Dr. Paquelin, and made by Charrière, of Paris. By means of an India-rubber bulb the vapor of petroleum or of some other hydro-carbon is forced through the tube and handle to the platinum point, which is first heated over a spirit lamp. A white heat is soon produced, which is easily maintained during operation by the current of vapor, and may even be reproduced after immersing the point in cold water. A sufficient degree of heat is maintained much better than by the galvanic battery; in short, this instrument supplies the place of the actual, the gas, or the galvano-cautery, and is a comparatively cheap substitute. The cost was about thirty dollars. Instead of petroleum vapor, sulphuric ether was used by Dr. Morton, but it was not so satisfactory.

Dr. J. C. Warren said that he had used this instrument the same day in a case of hæmorrhoids, and had found it extremely convenient and better than any that he had ever used. A finer platinum point was thought desirable.

Dr. E. G. Cutter showed a specimen of fracture of the right side of the vertical portion of the frontal bone, with depression. An intemperate woman, fifty years of age, was struck on the head by her husband, during an altercation, with a gallon milk-can three quarters filled with water. A compound fracture was produced. With the exception of a slight amount of pain at the seat of injury there were no symptoms of note till the sixth day after. Then there were occasional vomiting, slightly accelerated pulse and increased temperature, pain in the head near the wound, sleeplessness, and anorexia. The pupils were normal, and there was no paralysis, and no disturbance of special sense. On the seventh day the pulse and temperature were higher, the mind was more sluggish, and the patient was somewhat drowsy. On the eighth day she became comatose and could not be roused to consciousness. She muttered unintelligibly on being shaken. The face was pale. The pupils were equal, somewhat dilated, and responding slowly to light. The pulse and respiration were irregular, the former feeble. There was no paralysis. Death took place early on the ninth day. The patient and her friends repeatedly refused hospital treatment, and drugs prescribed to meet indications were not taken. The place where the patient lay was a damp, dark, unventilated back basement on Cove Street. The treatment consisted in washing out the wound twice a day with lukewarm water, approximation of the edges with adhesive plaster, and the insertion of something to serve the purpose of drainage, which, however, was rendered ineffectual by the patient's persistently sitting up in bed.

At the autopsy, the fracture was found to be half an inch to the right of the median line and about an inch and a quarter anterior to the right coronal suture and parallel to it in its course. Its length was very nearly an inch and three quarters, its width three quarters of an inch, and its shape elliptical. Both tables were depressed, the inner one perhaps one quarter of an inch, with a Y-shaped fracture at its most prominent part. There was a small, dark-red, somewhat firm clot one inch by one quarter of an inch in size on the ecchymosed dura mater beneath the site of the wound. There was general meningitis, more marked under the seat of injury, sub-arachnoid effusion and effusion of cloudy serum into the ventricles. On cutting through the pia mater a clot was found half an inch long and a line in diameter lying in the substance of the brain, which was softened and reddened through the gray matter into the white, about half an inch deep and three quarters of an inch long. There were many capillary ecchymoses in the brain tissue near the softened spot. The rest of the brain presented nothing remarkable. There was no lesion at the base of the brain opposite the wound. The examination of the rest of the organs presented nothing worthy of note.

WILLIAM WALLACE MORLAND, M. D.

THE news of the death of Dr. Morland, on November 25th, will be received with deep and sincere regret not only by the profession of his city and State, but by numerous friends throughout the country. Born at Salem in 1818, he entered Dartmouth College at the age of sixteen, and graduated in 1838. Three years later he obtained his medical degree at Harvard, and went abroad to continue his studies. On his return to Boston he practiced with success, but found time to indulge his taste for scientific study. In 1855 Dr. Morland and Dr. Minot were associated with Dr. J. V. C. Smith, who had long held the position of editor of this JOURNAL. Under the competent management of the new editors the JOURNAL rapidly improved, and, Dr. Smith resigning two years later, they edited it alone with increasing success till their resignation in 1860. When the City Hospital was opened, at the beginning of 1865, Dr. Morland was appointed visiting physician, which position he held for some five years. For nearly twenty years he has held the important office of medical examiner for the New England Life Insurance Company. He wrote a book on Diseases of the Urinary Organs, which appeared in 1858 and was very well received. In 1866 he won the Fiske prize by an essay on Uræmia. He contributed many articles to our pages, and was an excellent reviewer, acute, sound, and interesting. His paper on Florida and South Carolina as Health Resorts, which appeared in the JOURNAL in 1872, was the best and the best known of his smaller writings. His excellent advice to "follow the strawberries" will, we believe, save many an invalid from losing the benefit of a winter's exile by a premature return. The terse good sense of the expression is characteristic of its author. As a man and a physician Dr. Morland was alike excellent; of much learning and ability joined to the most charming and unpretentious manners. Grief for his loss will be as sincere as it is general.

MEDICAL NOTES.

— Dr. William L. Richardson, Inspector for the Boston Board of Health, is to be present at the cremation of the remains of Count Palm at Washington, Pennsylvania, on the 6th of December.

— A new epidemic of small-pox seems to have made its appearance in London. After the severe epidemic in 1871–72, says the *Medical Times and Gazette*, the disease rapidly disappeared till it had so died out that not a single death was recorded from it in the month of January of the present year. In February there were three deaths from it, and in March seven, and altogether during the first six months of the year thirty-three deaths from it were recorded. Since June the increase has been more rapid, so that between the end of that month and the end of September one hundred and ten deaths were registered as having been caused by small-pox in London. The weekly tale of deaths has not, however, varied greatly during the last six weeks, the numbers having been sixteen, eleven, fifteen, eleven, sixteen, and twenty-two,

the last being a higher number than in any previous week since July, 1872. The editorial further says, "the statistics we have given leave no room for doubting that we are in the beginning of a new epidemic of small-pox, or, in other words, of one of those cyclical increases that recur with such irregular regularity as to remind us how imperfectly we still employ the known means of preventing the recurrence and spread of the disease, which means are isolation and vaccination and revaccination."

— The Surgical Notes of the War in the East, by William MacCormac, F. R. C. S., published in *The Lancet* of October 14, 1876, contain many points of interest. In speaking of the Belgrade hospitals the writer says, "One case serves to illustrate the antipathy to operation entertained by the Servians. . . . . I found, in the hospital of the Serbische Frauen-Verein, a nice-looking lad of eighteen years, with a gunshot fracture of the head of the humerus, caused by a fragment of a shell. A considerable wound existed on the front of the joint; the head of the humerus was shattered; some fragments of the bone were quite loose; counter openings had been made behind; the upper end of the broken shaft was drawn up and pressing against the brachial plexus, thus causing excessive suffering. The suppuration was profuse, yet neither the poor lad himself, nor his father and mother, who were with him, would hear of anything being done."

In Semendria two interesting cases are reported to have been seen. One was a considerable gunshot depressed fracture of the anterior superior angle of the right parietal bone. The depression amounted to more than half an inch; but when Dr. MacCormac saw the patient, ten days subsequent to the injury, there had been no symptoms. The surgeon thought he might be blamed for not having trephined, but Dr. MacCormac very much commended him for not doing so, and not yielding to his inclination to operate. It was difficult, however, to persuade him to syringe out the wound with some cleansing lotion. He was afraid he might thus injure the brain, and preferred getting the man to hang out of bed with his head downwards, and so permit the very bad-smelling pus to escape from the rather deep wound.

Another case was one in which the bullet entered through the right temple behind the eye, and was believed to have traversed the posterior part of the floors of both orbits. The vision in the right eye was impaired, but the left eye was in a condition of exophthalmos, and the cornea opaque. The direction and depth of the wound appeared to indicate that the bullet, which had not emerged, lay somewhere behind the left eye, in which it had excited destructive inflammation.

LETTER FROM WASHINGTON.

Messrs. Editors, — We are now in the midst of lovely fall weather, welcoming the return of our residents from their summerings, counseling those whom Centennial experience has used up, who find themselves with their digestive organs out of order and with vague, and to them unaccountable, muscular

pains, which they fear may be the precursors of that terrible typhoid fever so talked of outside of Philadelphia. We are also busying ourselves with college, hospital, and society work, all of which is now in running order. In politics, the absorbing topic of the hour, we must perforce take interest, but it is purely selfish, and resolves itself into the question, Shall we gain or lose patients by the change? With no vote, no representation, and, in the main, with no part whatever in the political discussions of the day, the Washingtonian catches the contagion only from outside influences. On the other hand, during the term of an administration, he learns to appreciate the attractive personal qualities of those in place for the time being, without the obtrusion of political principles, so that a change is always to be regretted. A practitioner of recent date advocates a change for the reason that when he commenced practice the office holders by whom he was surrounded all had their family physicians. Now in a new deal he may stand a better chance.

Whilst referring to Centennial malaise we might mention a case in that connection with some peculiar symptoms, namely: A married man, about fifty, a generous liver, but not dissipated or under suspicion of syphilitic taint, some three days after his return from a visit to the Exhibition, is affected with diffused redness of the forehead and upper part of the face, with swelling most marked under the eyes, accompanied by a burning sensation, restlessness, fever, and loss of appetite. After an apparent incubation of two days longer, an eruption appears first upon the forehead, then along the border of the hair around the back of the neck, over the scalp and upon the face, in free and successive crops of pustules resembling those of variola so closely that at first precautions were taken to guard against contagion. Two or three isolated pustules appeared upon the hands and arms, about the elbows, and two upon the nates, but none upon the body elsewhere. The back, breast, abdomen, thighs, legs, and forearms were free from them. Some of these pustules maturated, and were of full size, comparable to those of variola, while others aborted. There was no marked umbilication, and some partook of the nature of furuncles. Two or three, those on the elbows, took on the character of broad ecchymotic spots. These successive crops were over four weeks in making their appearance, maturating in three days and subsiding, leaving behind a slight bluish elevation, which wore away only after the lapse of considerable time. Even at the end of the fifth week a few of these pustules appeared. During the prevalence of the eruption there was little or no constitutional disturbance, the fever subsided entirely, and marked debility was the only sequel. This occurred in the summer time, and a new straw-hat had been purchased during the visit. The straw rim irritated the forehead, abrading the skin slightly; perspiration was free, and the lining band was of colored leather. The favorite seat of the pustules exactly corresponded to the pressure of this lining around the head. Unfortunately, no examination was made of the lining, as it had been thrown away by the hatter to whom it had been sent for alteration.

The profession here has sustained a severe loss in the death of Dr. William P. Johnston, who died October 24th in his sixty-fifth year. He was a physician of upwards of forty years' practice in this district, educated in Paris, and

unceasingly active in the practice of his profession; indeed, in the opinion of his associates he wore himself out in the service, dying of an affection of the heart. He probably had the largest and best practice, for the two do not always go together, of any physician in Washington at the time of his death. He was for a number of years professor of obstetrics in the National Medical College, and was personally interested in the various hospitals and benevolent institutions of the city. When this can be said of a man it naturally follows that he must have had many friends outside of the profession who feel his loss keenly; and one, in giving expression to his feelings in the daily papers, while emphasizing the confidence patients had in laying their most secret matters before Dr. Johnston, unfortunately so worded his expressions as to convey an apparently unfavorable impression of other medical men. This led to a long and very pleasant article on the doctors, in an editorial of another of our newspapers in their defense, which concludes with the remark that their only failure to advance lay in the collection of fees, they being too remiss in collecting or charging enough. If this be a sincere expression from one of the laity, we may hope for better days pecuniarily. Dr. Johnston, like many of our overbusy men, has left but little behind him in our pages of medical literature. He leaves a son, who from his thorough education and assiduous attention to his profession gives full promise of rivaling his father in professional ability, but it would be hard to rival his ready smile, courteous manner, and sympathetic attention.

Dr. Billings has left us for a short trip in Europe, to look after the interests of his library (that is the most satisfactory way of putting it as the outgrowth of his efforts, although it is called the Library of the Surgeon-General's Office), and of his projected course of lectures in the Johns Hopkins University. He is receiving attentions from the profession in England which are highly flattering to him and to those whom he represents. It is to be hoped that the medical press will benefit by his foreign observations.

The colleges have opened for the winter with a fair showing of students in attendance, not sufficient to make one wildly enthusiastic, perhaps, but yet encouraging. The medical department of the Columbian University remains unchanged. The medical department of Georgetown University commences anew, as it were, all the members of its faculty being new men. We are to have a fourth medical college for our benefit, a Woman's Medical College, the faculty of which, it would seem, have not yet been selected. Dr. Mary Walker, who is practicing here, is not connected with it, and so far we know but little of its *personnel.*

A step of considerable importance has recently been taken by the medical association in re-admitting Dr. Bliss to membership. The association claims the right to govern the relations of members with each other as to consultations, etc., and some years ago saw fit to dismiss Dr. Bliss on grounds which it is not necessary to recapitulate here. The doctor admitted the justice and force of the discipline, acknowledged his errors, and asked to be restored to his former privileges, which, by this act, was granted. This relieves one member at least from personal embarrassment, but it goes beyond this simple personality in its principle. At the time Dr. Bliss was re-admitted to membership he

was, and is still, a member of the board of health, in affiliation with Dr. Cox, who is not recognized by the association, and with Dr. Verdi, who is a homœopath, both being also members of the board of health. This, then, puts the present board of health upon a different footing from that which it before held.

Since our last letter the published extracts from the report of the committee of investigation referring to Dr. Nichols and his management of the Government Hospital for the Insane have so fully vindicated that gentleman and fulfilled our predictions that it seems scarcely necessary to refer to it.

The medical society has resumed its meetings with matters of interest before it, but as it publishes its bulletin at such regular and short intervals it would seem improper to anticipate it in any way. The society has, however, made an attempt, by appointing a committee for the purpose, to secure some representation before the congressional district committees, oftentimes a very useful and important precaution. Bills are sometimes brought up before Congress, and are upon the eve of their passage before we are made aware of their existence, that are of great importance to us as a profession, as for instance the recent attempt of the so-called surgical institute ; had it not been that its wide scope affected the whole profession outside of the district, it is a question as to how far we could have restrained its influence.

HOMO.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING NOVEMBER 18, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	415	20.33	29.35
Philadelphia	825,594	324	20.41	22.24
Brooklyn .	506,238	171	17.37	24.92
Chicago . .	420,000	187	23.15	19.75
Boston . .	352,758	126	18.58	26 20
Providence	101,500	29	14.86	19.02
Worcester .	51,087	15	15.26	20.91
Lowell . .	51,639	16	16.11	20 55
Cambridge	49,670	16	16.75	23 31
Fall River	50,372	13	13.42	23.99
Lawrence .	36,240	11	15.78	25 96
Lynn . .	33,548	14	21.70	19.23
Springfield	32,000	4	6.50	20.93
Salem . .	26,344	8	15.79	22 92

Normal Death-Rate, 17 per 1000.

BOSTON SOCIETY FOR MEDICAL OBSERVATION. — A regular meeting of the society will be held at its rooms, No. 36 Temple Place, on Monday evening next, at eight o'clock. Dr. Fisher will read a a paper on Delusion, of a Week's Duration, induced by Heat-Stroke.

BOOKS AND PAMPHLETS RECEIVED. — The Functions of the Brain. By David Ferrier, M. D., F. R. S. With numerous Illustrations. New York: G. P. Putnam's Sons. 1876. (For sale by A. Williams & Co.)

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THE ANTISEPTIC METHOD.[1]

BY STEPHEN SMITH, M. D.

THE antiseptic method is designed to protect the wound from the action of septic ferments. The antiseptic agent preferred is carbolic acid properly diluted with water. Provide as follows: (1.) A vessel containing carbolic acid dissolved in water (1 to 40) for the immersion of the hands of the operator, the sponges and instruments used in the wound. (2.) A steam spray apparatus,[2] capable of giving a cloud of vapor; make the solution of carbolic acid to be atomized 1 to 30, which diluted by the steam will give a 1 to 40 spray. (3.) Antiseptic gauze, open cotton cloth impregnated with carbolic acid 1 part, common resin 5 parts, and paraffine 7 parts.[3] (4.) Mackintosh (fine cotton cloth with a thin layer of caoutchouc on one side, known in the shops as hat-lining); gutta-percha tissue of good quality will also answer, but is liable to wear into holes. (5.) Drainage tubes (India-rubber, with a silk ligature attached.) (6.) Oiled-silk protective (oiled silk coated on both sides with copal varnish, and afterwards brushed over with dextrine); when the copal varnish has dried, a mixture of one part of dextrine, two parts of starch, and sixteen parts of carbolic acid is brushed over; the acid soon evaporates. Common oiled silk smeared with the oily solution will answer the purpose pretty well, especially if used in two layers. (7.) Carbolized cat-gut ligatures.

Proceed as follows: If the wound is accidental, first wash the cut

[1] From advanced sheets of A Manual of Operative Surgery in the press of Hurd and Houghton.

[2] High-pressure steam, issuing by a minute orifice from a boiler heated by spirit lamp or gas, sucks up a strong solution of carbolic acid by a tube that dips into a vessel containing it, and, blending with it in about equal quantity, forms a 1 to 40 spray; the tube for the solution should be at an angle of 45° with that for the steam, having its point ground off obliquely so as to be exactly in the axis of the steam tube. For smaller amputations, Richardson's apparatus for local anæsthesia, with the 1 to 40 watery solution of carbolic acid, may be employed.

[3] Melt the paraffine and resin together in a water bath; add the acid by stirring; heat the cotton cloth to a higher temperature than the melting point of the mixture; use of the melted mixture an amount equal in weight to that of the cloth; to diffuse the heated liquid equally, sprinkle it over the gauze by means of a syringe with a number of minute perforations, place the gauze charged in a wooden box or hot chamber, and apply a heavy heated weight.

surface thoroughly with a saturated watery solution (1 to 20);[1] if the wound is made by the surgeon, (1) shave the part, if there is much hair, in order that the antiseptic may not be prevented from acting upon the skin; (2) wash the part with a watery solution (1 to 20) to purify the skin; (3) direct the spray upon the part and maintain its action and position during the entire operation and dressing without a moment's interval; (4) immerse the hands,[2] instruments,[3] and sponges[4] in the 1 to 40 solution before operating, and at every interval of the operation when they are not enveloped by the spray; (5) tie all vessels with antiseptic cat-gut and cut the ligatures at the knot; (6) place the drainage tube or tubes so deeply in the wounds as to drain all accumulating fluids;[5] if the tube enters obliquely cut the outer extremity obliquely; lay the retaining threads on the surface; (7) if the wound is to be closed, as after amputation, use carbolized silk for sutures,[6] as it is very superior to wire, not only on account of its perfect suppleness, but because its actively antiseptic character insures absence of putrefaction in the track of the wound;[7] (8) if strapping is required, common adhesive plaster may be rendered antiseptic by dipping it for a second or two in a watery solution of the acid, and it is most convenient to have the lotion hot; the ends should be overlapped by the gauze; (9) apply to the cicatrizing part a layer of the oiled silk protective,[8] dipped

[1] For cases of compound fracture, seen for the first time several hours after the accident, use a stronger antiseptic (1 part of carbolic acid in 5 parts of spirit of wine); introduce it into the recesses of the wound by means of a gum elastic catheter connected with a syringe by a piece of caoutchouc tube.

[2] If the finger is to be introduced into the wound take special care that it is an aseptic finger, and this is done by cleansing it with an antiseptic solution, making sure that it passes well into the folds about the nail.

[3] Instruments must remain in the antiseptic lotion sufficiently long to penetrate any dirt or grease which may be concealed on them, as between the teeth of forceps.

[4] Sponges, though used in suppurating wounds, but thoroughly treated with carbolic acid solution, are antiseptically clean.

[5] The effusion of plasma which occurs during the first few hours after the infliction of a wound is greater, when the cut surface has been treated with a stimulating wash, than it is under ordinary management; and, unless provision be made for its escape, it will be pretty sure, in a wound of considerable depth, to accumulate in sufficient quantity to cause inflammatory disturbance from tension. When the antiseptic has left the wound the discharge will be trifling in amount, unless the irritation is continued by blood or serum pent up in sufficient quantity to cause disturbance, or by some other accidental circumstance exciting the nerves of the part. In major amputations, during the first twenty-four hours, a strip of lint soaked with an oily solution of carbolic acid (1 to 10) may be laid in the wound, one end being left out at the most dependent part, the sutures being inserted more closely than is customary at all other parts.

[6] Silk thread with the interstices among the fibres filled up with wax containing about a tenth part of carbolic acid; mix the acid with melted beeswax; immerse the silk, and when thoroughly steeped, draw it out through a cloth to remove superfluous wax.

[7] The spray is never more useful than in the introduction of the sutures; if it be not employed the wound must be injected with lotion after the insertion of the last stitch, to destroy any mischief that may have entered through regurgitation of blood that oozes into the cavity during the sewing.

[8] Cicatrization is retarded when the acid is allowed to act immediately on the margins of

in the watery solution, and having a hole for the drainage-tube; (10) apply eight[1] layers of the gauze, of such size as to cover all the wound and the adjacent parts; dip the first layer in the solution;[2] between the last two layers place a piece of mackintosh of smaller size than the layers of gauze; apply the last layer so as to cover in completely the mackintosh;[3] (11) retain the dressings by bandages of the antiseptic gauze, over which elastic webbing may be applied when the bandage is not sufficient, as in wounds or abscesses in the groin. Inspect the wound on the day after its infliction, whether it be accidental or the result of operation, and change the dressing only in case the discharge is liable to extend beyond the edge of the folded gauze; during the subsequent progress of the case leave the gauze undisturbed for periods varying from two days to a week, according to the diminution of the effusion. In re-dressing continue the spray uninterruptedly on the part; while the bandage is being cut or removed, the patient, or an assistant, keeps his hand over the site of the wound, to prevent the dressing from rising *en masse*, and pumping in septic air; in raising the folded gauze take care that the spray passes into the angle between it and the skin; remove the drainage-tubes, cleanse them in the carbolic-acid solution, and before re-introducing them cut off such portions as the granulations in the wound render necessary to bring the external extremity flush with the surface of the skin; lay aside the gauze which is soaked, but use the mackintosh again after cleaning it with carbolic-acid solution.

FRACTURE OF THE PATELLA AND TREATMENT BY A NEW METHOD.[4]

BY HENRY O. MARCY, M. D. HARV.

No rule in medicine or surgery has fewer exceptions than that the treatment of diseases or of injuries which have many remedies is unsat-

the wound, and it is therefore necessary to protect the part by interposing between it and the gauze a layer o' some impermeable material.

[1] In situations where there is not as much extent of skin for the gauze to overlap as is desirable, as in the vicinity of the pubes, the deficiency of surface may be compensated by using the gauze in a thicker mass, say in sixteen or thirty-two layers

[2] If the gauze were applied dry, some active septic particle adhering to its surface might enter the blood or serum at the outlet of the wound, and propagate putrefaction to the interior.

[3] This impermeable cloth is used to prevent the discharge from going directly through the dressing; because, if a considerable quantity went through, the acid might all be washed out within twenty-four hours, and then putrefaction would spread inwards to the wound. The mackintosh having no antiseptic property except mechanically by its impermeability, but, on the contrary, being like other indifferent materials covered more or less with septic matter, it is necessary when the dressing consists of more pieces than one that the mackintosh be well covered in at the place of junction of the two pieces, for if it were allowed to project uncovered in the vicinity of the wound it might communicate septic mischief.

[4] Read before the Suffolk District Medical Society, October 28, 1876.

isfactory. This pertains in no small degree to the treatment of fracture of the patella. There is no fracture to which a greater variety of apparatus has been applied, and yet the results attained are by no means satisfactory; bony union rarely occurs, and the affected limb is seldom as strong as before the injury.

It is well to remember that the patella resembles the sesamoid bones in its development in the tendon of the quadriceps extensor, that it consists of loose cancellous tissue covered by a thin, compact lamina, and that it is this kind of osseous structure, moderately supplied with nutrient vessels, which, when injured, undergoes slow and imperfect reparative processes. From the exposed position of the patella it is subject to accidents of great variety; yet the large majority of fractures are transverse, and are caused by the enormous muscular force exercised by the extensor group acting in a spasmodic way, usually to prevent the body from falling backward. When we reflect that the full power of these muscles is probably expended in a great variety of the ordinary avocations of life, it is worth while to inquire how the patella can be fractured by muscular effort. This I believe to occur only when the muscular tension is at an angle with the long axis of the bone, producing a leverage effect over the condyle of the femur, and this is precisely the position of the body when an individual makes a sudden effort to save himself from falling backward. Soon after the injury there is usually developed a more or less severe synovitis, with effusion. This is a far more important factor in the injury and its results than is usually believed. It is generally supposed that the extensor group is in a state of contraction after the injury, and that, owing to this, the upper fragment is carried away from its fellow a considerable distance. If I may judge from my own observations this is not generally true, and in the patient seen immediately after the injury, when the limb is placed at rest in a state of extension, the fragments adjust themselves nearly in apposition, and remain so until separated by the effused fluid.

We should remember that the patella is firmly attached by its entire circumference to strong fibrous structures; and, when the bone is broken, many of the fibres may escape injury, and are usually amply sufficient to retain the fractured portions in place — the limb being extended and at rest — so long as there is no distending force exerting pressure from within. Soon, however, fluid is effused, and though at first only a slight separation existed between them, the fragments are now removed a considerable distance from each other. Not only does fluid occupy the space between the fragments, but these are tilted upward at a considerable angle. There are rare cases where very little effusion occurs, and it is, as I believe, precisely these cases in which the fragments are little separated and the best results are obtained. I think I have seen one case of true bony union, and, as I remember it, although

it was some years ago and before I recognized the clinical importance of the effused fluid, there was little or no distension of the joint.

A good practical rule might be deduced that the results will depend largely upon the amount and duration of the fluid. The farther apart the fragments are, the greater the difficulty of apposition, and if separated for any considerable period they cannot unite by bone.

Mr. William Adams has given us much valuable information in his careful study of the specimens of this fracture contained in the London museums. When the fragments are not separated more than an inch and a half, the interspace is usually filled by firm fibrous tissue. In some of these cases, however, and in those separated by a greater space, Mr. Adams finds that the fragments are not united by plastic matter, but are bound together by thickened fasciæ which pass over the patella and incorporate themselves with the bursa patellæ. This aponeurotic structure is arranged in different ways. It may be adherent to the periosteal surface of both fragments and pass between them; it may be reflected over, and may be adherent to both fractured surfaces; or, as most frequently happens, the connecting aponeurosis may pass from the periosteal surface of the upper fragment to the fractured surface of the lower one, to which it becomes firmly united. In the majority of cases, when thus united the fragments are tilted outward, being in closer relationship upon the articular than upon the periosteal surface. Of thirty-one specimens examined, fifteen were thus united, twelve by ligamentous and four by undetermined union. Union as thus described leaves a very imperfect result. The limb is weak, the joint is unprotected, the fragments are so widely separated that the articular surfaces may be felt between them, and the fasciæ may be folded in or adherent to the capsule of the joint.

This brief review of the injury, and of the character of the inflammatory and reparative processes, brings us naturally to the consideration of its treatment. Much ingenuity has been expended in a great variety of appliances, as every surgeon is aware, from Sir Astley Cooper's bandage above and below and cross-ties between, and Malgaigne's hooks variously modified, and especially made practicable by Spence of Edinburgh, to the method of Eve of Tennessee, who surrounds the fragments with a ring. The fragments have even been cut down upon and wired, with bony union as a result; and as a believer in antiseptic surgery I trust it may not be too much to hope that the time will come when this may be adopted as the safest and best rule.

Professor Wood's method, modified by Hamilton, of a figure of eight bandage, the limb resting upon a wide inclined plane, is a favorite one in America, and I have used it in a number of cases with good results. It is open to two objections: first, it tilts the fragments forward and consequently places them in an unfavorable position for union; secondly,

the constrained position is a very painful one to the patient. A large, fleshy woman, who had sustained fracture of both patellæ from muscular action, was treated by me two years ago by this apparatus. It was midsummer, and the suffering from this unnatural and constrained position alone was most cruel and severe.

Sanborn, of Lowell, has devised a very simple appliance which has given excellent results. This consists of a long piece of adhesive plaster extending from the thigh to the ankle, left in a loop over the knee; this is twisted by an inserted stick until the desired approximation is attained. Of course the limb remains at rest on a splint.

Mr. Teale, of Leeds, has treated a number of cases by the "expectant method" with success. He evidently recognizes the fact referred to earlier in this paper, that the muscles when at rest are not in a state of contraction, and gives the following reasons for the approximation of the fragments: "First, at the time of injury the quadriceps extensor is thrown into a state of tonic contraction. After a few days this contraction relaxes, and the muscle gradually regains its normal length, thus removing all traction on the broken bone. Second, the effusion, which always occurs at the time of the accident, is slowly absorbed, and by its removal allows the fragments to fall together. And third, the fibrinous band, which is formed between the opposing surfaces, has, like all cicatricial tissue, a tendency to contract, and thus to complete the approximation."

Much ingenuity has also been expended upon the construction of hospital appliances to bring, by means of weights and pulleys, the fragments into apposition, and good results have been obtained.

A careful study of the pathological processes brings one to the deduction of a few simple rules for treatment.

The first, and as I believe one of the most important factors of all, is the effusion. This, if in large quantity, or if not rapidly absorbed, from my experience in aspiration in acute synovitis of idiopathic character, I would unhesitatingly remove by the aspirator, and repeat the operation if necessary. The fracture cannot be treated in permanent apparatus until after the effusion has disappeared, but rest on pillows, cold applications locally, etc., answer very well. I have in several instances placed the limb in Hamilton's splint for the first week.

As soon as the traumatic inflammation has subsided, I have used in the last three cases the following, which so far as known to me is a new method of treatment.

Adhesive plaster of good quality, upon strong cloth (I have found that of Mow & Sons, of London, prepared upon thick cloth, the best), cut in pieces of concentric shape, of considerable width, should be carefully adjusted both above and below the patella. The inner edges are best turned slightly back upon themselves, or welted over a small cord,

while the projecting points are doubled back for reinforcement as well as to prevent their adhesion to the skin. These pieces are perforated for the introduction of an elastic cord.

The limb is carefully enveloped in a plaster bandage extending from the toes to the hip, and strengthened by inlaid pieces of tin. The same precautions are required in the application of the bandage as in fracture of the thigh, to secure rest and support, as well as disablement of the muscles. The best proof of its proper application is that the limb is perfectly comfortable, and at the same time voluntary muscular contraction is reduced to the minimum.

Tins are incorporated into the bandage each side of the knee, of suitable shape to reinforce the fenestra, which is at once cut in the bandage, of oval shape and sufficiently large to liberate the entire patella, with a free surrounding of nearly an inch. Loops of wire (one or better two on each side, above and below the knee) are also adjusted in the bandage at suitable distances for the tying of the elastic ligatures fixed in the extremities of the adhesive plaster. The proper position of these loops is of some importance; for if placed too low, the pressure is too great from above downward, which results, as in the figure of eight bandage, in tilting forward of the fragments, thus causing the fractured surfaces to approach each other at a greater or less angle.

Pressure is made upon the fragments by the adjustment of the cords. Much less force is required than would be supposed, the lower piece of plaster fixing the lower fragment, while the upper draws its fellow into apposition. The inclosed surface over the patella is easily rendered œdematous by interference with the capillary circulation, if too much tension is used.

The patient may be at once allowed to walk with crutches, the foot being supported by a sling from the neck, as in fracture of the thigh. After the first week he may ride, and, in fact, attend to many light duties.

In illustration of this treatment I will briefly report my last three cases treated by this method.

Case I. April 21, 1876. Mr. T. L., a strong, healthy man, in middle life, fractured the left patella transversely by muscular effort. The leg was kept at rest upon an inclined plane until the effusion, which was of considerable amount, subsided, and on April 27th was put up as above described.

The splint was removed at the end of seven weeks, and a light splint was adjusted for a few weeks longer. The patient was on crutches after the first few days, and busied himself most of the time correcting proof, as his business was that of a music printer. September 1st, he walked with only a slight halt, and chiefly complained that the limb became tired sooner than its fellow. The union is ligamentous, and does not exceed a quarter of an inch in length.

Case II. April 28th. Mr. F. L., aged twenty-nine, fractured the right patella transversely by muscular action. The synovitis was severe and the effusion was very marked, and in consequence I was unable to apply a permanent apparatus until the thirteenth day. The fragments came well into apposition and were easily retained. In a few days the patient walked with the aid of crutches, and enjoyed driving almost every pleasant day. The treatment in all respects was similar to that in the first case. September 1st the fragments were separated by about one third of an inch, and on the 25th by five eighths of an inch. The union now seems firm and the fragments freely movable, but the fractured edges are tilted forward at an angle, and the result is evidently modified and less successful on account of the great amount of effusion. In a similar case I would aspirate the fluid. The patient wears a knee-cap, and walks easily with the aid of a cane.

Case III. Mrs. W., seen in consultation with Dr. Flowers, of Cambridge, fractured her right patella in April, six years ago, and was kept in bed nine weeks, the limb supported on a straight splint, and then had a plaster splint adjusted, which she continued to wear until the following January. The limb was almost entirely stiff for many months, yet the fragments were separated so that the finger could be laid between them. July 6, 1876, the ligamentous union was broken by a muscular effort to save herself from falling. There was a considerable amount of effusion and ecchymosis, which subsided in about ten days, when I applied the apparatus as above. She began to walk with crutches in a few days, and suffered very little during her treatment. The splint was removed in fifty days, a knee-cap was applied, and the patient now walks with the aid of a cane. The fragments are separated one fourth of an inch. The knee can be slightly flexed.

New devices are likely to be overestimated. I would not claim too much for the above method. It has the advantage of being simple, keeps the injured parts open to inspection, saves the patient the irksome suffering of weeks in a constrained position, and maintains his general health by exercise and ability to be out of doors, which last is no minor factor in hastening the reparative processes. In the hands of any physician of moderate mechanical genius it can scarcely fail of securing satisfactory results. As in cases treated by any other method, care should be exercised for a considerable period after the removal of the splint not to bring the limb into too free use, for not rarely will the tendon itself lengthen after several weeks have elapsed, and what appeared to be a good result, months later makes a different exhibit. This is illustrated by the case of a physician in Cambridge, who remained on his back four months in order to be certain of a good result, but the tendon gradually lengthened for some months, until now it measures about two inches.

RECENT PROGRESS IN DERMATOLOGY.

BY JAMES C. WHITE, M. D.

The Pathology of Epithelium. — Dr. Van Harlingen publishes[1] the results of some examinations of the epithelium from portions of skin affected by seborrhœa, psoriasis, and eczema for the purpose of aid in differential diagnosis in the scaly stages of each disease. In each the epithelium was found to resemble that of the other affections while preserving slight peculiarities of its own. In psoriasis the cells are yellowish, dry, staining with difficulty, and present contents faintly or not all granular. Nuclei are rarely present, and are pale and indistinct. The cell outline is jagged, with a tendency to curl. In eczema the cells are transparent, smooth, stain fairly, and present no granular contents. The outline is thin and irregular; the nuclei are faint and rare. In seborrhœa capitis the cells are smooth and regular in outline, stain deeply, possess large and distinct nuclei, and only occasionally have indistinctly granular contents.

Plasma Tubes of the Skin. — Key and Retzius state[2] that they have discovered an extended system of large plasma passages communicating with the lymphatic vessels of the skin. In the deepest parts, and around the sweat glands and hair follicles, they are relatively large and wide; in the external portions they become more slender, but are abundant, form a fine network in the papillæ, and finally penetrate to and communicate with the intercellular spaces of the rete.

Bromidrosis Pedum. — Dr. Longworth, of Cincinnati, gives[3] the results of some experiments made by him to test the truth of the commonly accepted opinion that the ill odor in this affection is due to decomposition of the elements of perspiration. Horny epidermis was removed from different parts of the cadaver, including the soles of the feet, soaked in ether three or four hours, and washed thoroughly in water. It was then entirely odorless. Being placed in test tubes with just enough water to cover it, and kept at a temperature of 90° F., the specimens from the various parts behaved differently. Those from the chest and abdomen preserved their transparency, and did not swell up for several days; the fluid, however, became turbid, and had a fetid odor resembling that of bromidrosis. Those from the soles began to swell up within an hour or two, and after twenty-four hours gave out an odor absolutely identical with that under discussion. Dr. Longworth concludes, therefore, that the odor of the affection is due to the maceration and decomposition of the horny epidermis.

Malarial Dermatoses. — Dr. L. P. Yandell, Jr., of Louisville, Ky.,

[1] American Journal of the Medical Sciences, July, 1876.

[2] Medical Record, August 26th, from Nordiskt med. Arkiv, vol. viii., No. 5.

[3] The Clinic, October 30, 1875.

in a brief report[1] on dermatology read before the Kentucky State Medical Society, states that "the acute skin affections have their chief source in malaria," while the "chronic diseases have their origin chiefly in the strumous diathesis." The only two classes which have any claim to be considered local diseases are in his opinion those caused by animal and vegetable parasites, and even in these he believes some constitutional defect may usually be found.

As so much has been published recently against the local nature and origin of skin diseases, and in support of Gallic diatheses, blood changes, and other mysterious influences which underlie their ætiology, all of which lead to the most diverse and unnecessary drugging of the patient, it is refreshing to note that the latest theory as to their ætiology is a purely modern, native American one. Dr. Yandell, living in a malarial atmosphere, naturally sees many things cutaneous through this medium, as does the student educated in the French school through the dartrous haze which envelops it, and the one theory is as good as the other. So if he argues from the good effects of quinine and arsenic in some of these affections in support of his views, he stands upon precisely the same ground as do they who, from the supposed therapeutical action of other drugs in these affections, claim that they thus demonstrate their constitutional nature.

There are two questions for Dr. Yandell to answer: Are acute affections of the skin in Kentucky different from those in New England? Are they more common there than here? They certainly are very common amongst us, where malaria scarcely exists.

Relation of Skin Diseases to Diabetes. — Professor Pick, of Prag, in a paper[2] upon this subject enumerates three kinds of dermatoses connected more or less intimately with this affection: (1) those which are simply coincident with the diabetes, and are more or less modified by it, as certain forms of eczema; (2) those which arise from the same general condition as the diabetes, and may precede or succeed it, as pruritus cutaneus, furunculosis, due to some disturbance of the central nervous system; and (3) cutaneous affections directly caused by the changes in the organism produced by the diabetes, the circulation of sugar in the blood, as xeroderma, other forms of eczema, pruritus, furunculosis, and even carbuncle. He calls attention to the importance of examination of the urine in such dermatoses.

Pityriasis Circiné. — Under this title Horand,[3] chirurgien-en-chef de l'Antiquaille, describes an affection seated upon the neck, trunk, and limbs, but especially upon the scapular, deltoid, and sub-clavicular regions. It consists of discrete or confluent patches, varying in size

[1] Reprinted from the American Practitioner for May, 1876.
[2] Allgemeine Wiener medizinische Zeitung, No. 34, 1876.
[3] Annales de Dermatologie et de Syphiligraphie, tome vii., No. 5.

from that of a pea to that of a half-dollar piece, circular, scarcely elevated above the general surface, and either level or depressed in the centre, so that the elevated border presents the appearance of a ring. Their color varies from pale rose to yellowish-white, approaching at times so nearly the tint of the surrounding skin that they are recognized with difficulty except by examining them obliquely. The patches are always dry, and more or less scaly, and the underlying and surrounding skin is apparently unaltered. They are sometimes accompanied by a little itching, and in consequence of scratching are reddened, but otherwise they exhibit no manifestations of marked inflammation throughout their course, which may extend over several months without change in their appearance or size. When it finally disappears it leaves no trace of its former presence. The patients — and it affects all ages and the sexes alike — are usually in good health. The affection is not contagious or parasitic, and is very rare. M. Horand offers no explanation of its nature. It yields to local measures, baths of sulphide of potassium or carbonate of soda, to frictions with soft soap, or, if these are insufficient, to mercurial ointments.

A Contribution to the Knowledge of Pemphigus.[1] — Professor Neumann, of Vienna, reports a fatal case of pemphigus of four months' duration, in which, after the rupture and casting off of the roof of the bullæ, an appearance showed itself upon their bases resembling what has been described by Hebra in similar cases as a croupous exudation. The tissue was found by Neumann to consist of a new formation of papillæ and capillary loops, containing also exudation and pigment cells. That they were a true new growth and did not spring from preëxisting papillæ, but from the cutis tissue, was shown by their occurrence where papillæ do not normally exist. This growth has never been recognized before.

A Contribution to the Therapeutics of Acne Rosacea. — Professor Neumann, of Vienna, after calling attention [2] to the fact that it is the vascularity of the tissues which prevents the permanent cure of the disease, recommends the following method for the cure of this condition. The enlarged or new-formed vessels are slit open by a cataract needle; slight scarifications and punctures of the diffused red districts are also made, the existing nodules are removed by the scoop, and the hæmorrhage checked by lint. The parts which are red without visible capillaries are then painted with a solution of carbolic acid in alcohol, one to three or four parts. The pain produced is slight and soon disappears, leaving a thin coating which peels off in a few days, or is removed by the next painting, which must be repeated every second day. The results by this method in the flat forms of the disease, Professor Neumann claims, are always successful.

[1] Stricker's medizinische Jahrbücher. Heft iv. 1876.

[2] Allgemeine Wiener medizinische Zeitung, No. 37, 1876.

Elephantiasis of the Nose; Treatment by Decortication. — M. Ollier,[1] of Lyon, described at a recent meeting of the Paris Academy of Medicine his method of cure of this distressing deformity by the destruction of the greater portion of the diseased integument and underlying tissues by the knife, galvano-caustic, or actual cautery, leaving only the skeleton of the nose untouched. He claimed that the cure by this method is radical. A long discussion followed as to whether the affections of the sebaceous glands always found accompanying the enlargement are to be regarded as a primary and essential element in its causation or not.

Treatment of Lupus. — Veiel[2] gives in the yearly report of his skin hospital at Cannstatt an account of the various methods employed there in the treatment of this affection. Cod-liver oil was given, especially to patients of a scrofulous habit. The main reliance, however, was placed upon the local destruction of the lupus efflorescences, for which scarification with subsequent cauterization by chloride of zinc is still recommended by Veiel as the best means, particularly on account of the fine scars which result. Scooping or pricking without subsequent scarification was always followed by relapse in a short time. As a most valuable remedy, on account of the slight painfulness and exactness of its application, and the fairness of the resulting scars, he recommends chloracetic acid. For small, superficial lupus patches a single painting with it suffices. The crust separates generally without suppuration, and leaves a small, shallow scar. Larger and deeper places are best treated by boring the acid into them with a glass rod, and treating the wound after the crust falls by mild cauterization with chloride of zinc. In this way he succeeded in perfectly healing a lupus superficialis which covered a large part of the upper arm. The acid is of great service also in destroying the projecting cicatricial cords, which sometimes follow the cure of lupus, employing between the cauterizations the emplastrum cinereum.

In lupus erythematosus good results were obtained in some cases by the repeated use of an ointment of biniodide of mercury, one part to five. Scarification with subsequent cauterization with chloride of zinc also produced a cure.

Leprosy in Sicily. — Professor Profeta of the University of Palermo communicates[3] the results of his studies of this disease, which extend over a period of seven years and a half and embrace one hundred and fourteen cases (eighty men and thirty-four women). In former centuries, when the number of leper asylums in Europe amounted to nineteen thousand, two of these were established in Palermo, whereas dur-

[1] Le Mouvement médicale, August 26, 1876.
[2] Vierteljahresschrift für Dermatologie und Syphilis. III Jahrg. 2 Heft.
[3] Annales de Dermatologie et de Syphiligraphie, tome vii., No. 4.

ing the last eight years but eight cases have occurred in that city, and from many districts where it formerly occurred the disease has wholly disappeared. Dr. Profeta regards hereditability as the only known element in its ætiology, and discards as unsubstantiated by his own studies the possibility of communication by contagion, nursing, and vaccination. So far as the former is concerned, examples of transmission down to the fourth generation have been observed in Sicily, and it is a recognized element in three quarters of his cases. The conditions favorable to its development are still a matter of mystery to him. Proximity to the sea, the over use of fish diet, bad hygienic conditions, the presence of malaria, which have all been assigned as causes of its production, seem to bear no such relation to it in Sicily. The cutaneous symptoms presented by the disease there are both of the anæsthetic and tubercular form. Professor Profeta appears to have made use of many kinds of medicine, but concludes that all are powerless against the course of the disease. Of the one hundred and fourteen lepers which have been the subjects of his observations, sixty have already died, the mean duration of the affection being with them thirteen years.

The Ætiology and Treatment of Leprosy. — Dr. Munro in the beginning of his paper [1] refers to the opinion expressed by Dr. Bakewell, of Trinidad, in his report to the committee of the House of Parliament, that leprosy is on the increase in that and neighboring islands in consequence of the introduction of compulsory vaccination. Dr. Munro was at that time resident at St. Kitts, and found by statistics that the disease is increasing in Demerara alone, a badly vaccinated colony, while it has decreased in all the other islands since the introduction of vaccination. He is, however, a believer in its communicability from man to man.

Port-Wine Mark and its Obliteration without Scar. — Dr. Squire in this paper,[2] which forms one of a series of essays on the treatment of skin diseases, announces a method for the removal of one of the most disfiguring conditions which the skin ever presents, that diffused, congenital, varicose state of the cutaneous vessels known by the above name. The process, as he describes it, is as follows: freeze the parts to be operated on by means of the ether spray until perfectly insensible; then scratch it with an ordinary cataract needle with parallel scratches; then place a piece of blotting paper on it before it has thawed and consequently before it has begun to bleed, pressing it firmly on the skin for five minutes. After half an hour wet the paper with cold water, and remove it carefully in the direction of the scratches, for if peeled off transversely to them they will begin to bleed. The surface of the

[1] Edinburgh Medical Journal, September, 1876.
[2] London: Churchill. 1876.

skin will be found to be covered with a thin clot of blood, which should be carefully washed off with a camel's-hair brush moved in the direction of the scratches. The surface may then be coated with a thin film of glycerine by means of the brush, by which any subsequent hot and hide-bound sensation is avoided. The scratches need not reach more than half through the thickness of the skin, not more deeply than the sixteenth of an inch at the most, and should not be farther apart than the sixteenth or thirty-second of an inch. Should the operation require to be repeated, it may be undertaken within a few days, in which case the scratches must be made in a direction oblique or transverse to the original ones, and this may be repeated as often as may be required. The whole business at each time may be performed within a minute, and no pain or disagreeable sensation is experienced by the patient, not even a drop of blood is lost. No scar whatever remains, and no trace of the mark is left within a fortnight after a successful operation.

Ueber den Flachen Hautkrebs, etc. Von Eduard Lang.[1] In this lecture upon superficial cancer of the skin (rodent ulcer), Lang, professor of dermatology at Innsbrück, gives an admirable description of the disease and of the differential points of distinction between it and the affections with which it is most commonly confounded, the syphilitic ulcer and lupus vulgaris, the clinical and anatomical features of the three diseases being discussed at great length. The author takes the opportunity of repeating his views (see former reports) concerning the individuality of the lupus process. In the treatment of this form of cutaneous carcinoma he strongly advises the use of the scoop, the pain and hæmorrhage produced by it being very slight, and the resulting scar smooth.

(*To be concluded.*)

BRISTOWE'S THEORY AND PRACTICE.[2]

A CAREFUL examination of this work enables us to speak very favorably of its merits as a text-book for students, and as a convenient volume of reference for practitioners. Like most treatises on theory and practice it is divided into two parts. The first part is devoted to the general considerations which underlie the knowledge of all diseases; in other words, to general pathology. This includes a chapter on the physiological processes in health, which is followed by an account of the common morbid processes, cell-growth, inflamma-

[1] Wiener Klinik. II Jahrgang, 5 and 6 Heft. May, 1876.

[2] *A Treatise on the Theory and Practice of Medicine.* By JOHN SYER BRISTOWE, M. D. Lond, F. R. C. P., Physician to St. Thomas's Hospital, Joint-Lecturer on Medicine at the School, and Examiner in Medicine to the Royal College of Surgeons, etc. Edited, with Notes, by JAMES H. HUTCHINSON, M. D., Attending Physician to the Pennsylvania Hospital, etc. Philadelphia: Henry C. Lea. 1876. 8vo, pp. 1089.

tion, hypertrophy, atrophy, degeneration, and necrosis; mechanical and functional derangements, including congestion and dropsy; fever, the treatment of disease, tumors, and some other subjects. Thrombus and embolism are included under the head of diseases of the vascular system. More space is allotted to this department than is usually found in text-books on practical medicine, and the most advanced views on these subjects, so far as they are generally accepted, are presented to the reader. The busy practitioner will be able, by its perusal, to keep abreast with the great progress which scientific medicine has made within the past few years, and for which he has neither the time nor, frequently, the opportunity, to consult larger treatises, monographs, and journals. We would especially call attention to the articles on inflammation, on tubercle, and on tumors, as, among others, replete with valuable information, and as written in a clear and intelligible style.

Our limits permit us only to point out a few of the excellences of the second part, or special pathology, of Dr. Bristowe's work. While all of it is deserving of high praise, we must particularly commend the portion devoted to diseases of the nervous system, which is very complete, and well represents the present state of our knowledge on this important subject. It is preceded by a sketch of the anatomy and physiology of the nervous system, and contains a description of all the important structural and functional affections of the brain, spinal cord, and nerves.

The style of the work is plain and lucid; though condensed it is never bald. Controversy is avoided, and illustrative cases are omitted in order to give more room to practical teaching. As an accurate and trustworthy guide it is of the highest order of merit, and though it will not probably supersede in this country Dr. Flint's admirable treatise, it has the advantage of embodying the discoveries and improvements which have been made since the last issue of that work.

The book is beautifully printed on excellent white paper, and its appearance is highly creditable to the publisher.

WOODHULL ON THE NON-EMETIC USE OF IPECACUANHA.

THIS is an interesting and valuable contribution to the subject of the therapeutic virtues of ipecacuanha, founded in part upon observations and experiments of the author, and supplemented by numerous citations from other writers. Dr. Woodhull believes that the valuable properties of the drug are not so fully appreciated as they should be by the profession at large, especially when employed in comparatively large doses, which, he states, are not usually emetic, especially if administered in a small vehicle. He believes that it is a direct nervous stimulant, acting chiefly, if not entirely, upon the sympathetic system, and that in this way its beneficial effects in many diseases may be explained. These effects have been known for some time in India, where ipe-

[1] *Studies, chiefly Clinical, in the Non-Emetic Use of Ipecacuanha: with a Contribution to the Therapeusis of Cholera.* By ALFRED A. WOODHULL, M. D., Assistant Surgeon and Brevet Lieutenant-Colonel, United States Army. Philadelphia: J. B. Lippincott & Co. 1876.

cacuanha is largely given in dysentery, and Dr. Woodhull cites twelve cases of this disease, "selected from those occurring in my own practice within the past two years, not as specially successful cases, but as fair types of the whole," in which the remedy was not only followed by relief, but, in some cases, so promptly and permanently, that we cannot reasonably deny its efficacy. Other cases, equally convincing, are furnished by friends of the author, and numerous citations are given from the published writings of other physicians to the same effect. The conclusion drawn by the author from this evidence is, that it establishes "with reasonable clearness the readiness with which ordinary sporadic dysentery yields to large doses of ipecacuanha, and that ipecacuanha in twenty and thirty grain doses does not necessarily cause emesis."

Although the efficacy of ipecacuanha in large doses in the treatment of other diseases is not so clearly established, it seems to be of benefit in some cases of diarrhœa, cholera morbus, cholera infantum, and the vomiting of pregnancy.

Part third of the work is entitled A Speculation upon Cholera, for which disease, as might be anticipated, the author proposes large doses of ipecacuanha as likely to be of service.

Although containing but little that is new, this essay is a convenient recapitulation of the therapeutical properties of ipecacuanha, and is written in a modest and pleasing style.

ZIEMSSEN'S CYCLOPÆDIA.[1]

We welcome the present volume, which maintains the high standard of its predecessors in this series. The chapters on the diseases of the circulatory system are by Rosenstein, Schrötter, Lebert, Quincke, and Bauer; the remainder by Steffin, Vogel, and Wagner, all of whom stand very high in the profession in Germany. The translation, as heretofore, has been very well done.

HOURS WITH JOHN DARBY.[2]

This little book is in the author's well-known style, and is by no means an unfavorable specimen of it. It is advice from an old to a young man on the question of a wife, and on the knowledge of himself and of the world, in the widest sense, which the man must bring to make his choice fortunate and his future life happy.

The philosophy with which the work abounds is all sound and pure, and puts the reader on the right road to the consideration, if not to the solution, of many of the most pressing social and political difficulties.

[1] *Cyclopædia of the Practice of Medicine.* Edited by Dr. H. von Ziemssen. Vol. VI. Diseases of the Circulatory System, together with the chapters on Whooping-Cough, Diseases of the Lips and Cavity of the Mouth, and Diseases of the Soft Palate.

[2] By the author of Thinkers and Thinking. Philadelphia: J. B. Lippincott & Co. 1877.

DISEASES OF THE RECTUM.[1]

ALTHOUGH the literature of this subject has received a fair share of attention from writers of excellent standing during the last half century, there has been little of novelty, in either pathology or treatment, to attract general attention to this branch, as has been the case with so many other special departments of medicine. There is perhaps no portion of minor surgery with which the general practitioner is less familiar than the more common affections of this region. Many of the lesser evils with which the rectum is afflicted are consequently neglected, and the specialty has fallen an easy prey to adventurers. Be this as it may, we feel sure that few practitioners would fail to profit by reading a standard work on diseases of the rectum such as is offered by Mr. Curling in the last edition of his work. His wide experience, embracing a period of practice of great length, gives the stamp of originality to all parts of his subject, while the high standing of the writer lends its due amount of weight to the opinions expressed. We find in this book not only the usual chapters on piles, fistula, painful ulcer, etc., but also an exceedingly valuable account of congenital imperfections of the anus and rectum, and a variety of practical subjects which are never found in text-books and are rarely seen in special treatises.

The chapter on hæmorrhoids presents the subject in a clear light, and would be profitable reading to many physicians who are in the habit of dismissing this affection with an unguent and laxative, frequently prescribed without any attempt at an examination.

In cases of internal hæmorrhoids needing operative interference, Mr. Curling prefers the ligature to the cautery. The discomforts of the former method are doubtless greatly alleviated in his hands by the care with which he separates the base of the pile from the margin of the anus before applying the ligature. Improved means of employing the cautery will, we think, make this method a more popular operation among surgeons than it has been. We are inclined to think that the amount of tissue destroyed can be more carefully regulated in the latter procedure, while convalescence is more rapid and less painful. Certainly nothing can be more annoying, to physician as well as patient, than the irritation frequently produced by a carelessly tied pile; too deep a ligature is also not without its dangers.

The ætiology of chronic ulceration and stricture is undoubtedly obscure. These diseases are popularly supposed to be either syphilitic or cancerous; stricture is considered by some to be the result of ulceration; by others the ulcerations are thought to follow, not precede, the stricture. The author mentions a variety of ulcers, among which the syphilitic, the dysenteric, and tubercular may be mentioned. Difficult labor is spoken of as a not infrequent cause of stricture. The relations of stricture to syphilis are but incidentally alluded to. Although the subject receives a fairer share of the author's attention than usual, much remains to be said: and we feel impressed with the fact

1 *Observations on the Diseases of the Rectum.* By T. B. CURLING, F. R. S. Fourth edition, revised and enlarged. Philadelphia: Lindsay and Blakiston. 1876.

that a more careful study of the pathology of these affections would throw valuable light on what is still an obscure subject.

We are somewhat disappointed to find that Mr. Curling has not alluded to others methods of treating fistula than by the knife or ligature. This is a domain in which the laity, at least, entertain strongly partisan views. The treatment "without the use of the knife" has long proved a profitable field to the charlatan. We should have been much interested in an expression of opinion from so experienced a practitioner as the author, as to what class of cases were suited to this treatment. In this respect we do not think that this chapter, nor, indeed, that on ulceration, compares favorably with the work of Allingham. We must remember, however, that the book has been revised several times, and represents the experiences of a veteran whose opinions are entitled to respect.

THE MEDICAL REGISTER FOR NEW ENGLAND.[1]

We are glad to see that the success of Dr. Brown's earlier Registers (that of Boston and vicinity, 1872, and of Massachusetts, 1874) has been such as to induce him to undertake the present one. As the preface states, it includes all the information contained in its predecessors, with the many changes and additions needed to bring the work to the present time; it has been so far enlarged as to embrace reliable information regarding all medical organizations of the regular school throughout the New England States. Considering that this includes medical schools, libraries, museums, and societies and associations of various kinds, the compilation is no small task, and Dr. Brown deserves great credit for the thoroughness which it shows. Besides the alphabetical lists of the members of the medical society of each State there are others giving the names of the physicians in each town, which we think will prove very convenient. The lists of the state societies are authorized by their respective secretaries, with the exception of that of Vermont, an exception that we are at a loss to understand, for one would think that the author of such a work would receive ready assistance from his colleagues. Besides the institutions of New England proper, the work contains due notices of those of general interest, such as the American Medical Association, and the rules concerning the medical departments of the army and navy. There is a list of nurses, male and female, recommended by physicians, and the information in the book is made readily accessible by eighteen pages of index. Each copy contains a separate sheet giving a practical illustration of the advantages of the metric system and of the way to use it. In a word, the book is full of useful information, and we heartily recommend it. It will appear in a few days.

[1] *The Medical Register for New England.* By Francis H. Brown, M. D. Boston: H. O. Houghton & Co. 1877.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

ARTHUR H. NICHOLS, M. D., SECRETARY.

THE annual meeting of the society was held at Hyde Park, the vice-president, DR. JOHN P. MAYNARD, in the chair. Forty-three members were present.

Irreducible Hernia of the Omentum; Operation; Recovery. — DR. J. HENRY DAVENPORT displayed the contents of an irreducible hernia, recently removed, and gave a detailed history of the case. The patient was a strong, healthy man, aged forty-eight, weighing about one hundred and seventy pounds. Since the age of twenty-eight he had been the subject of a right inguinal hernia, which for the past seventeen years had been irreducible. The protruding mass was the source of considerable trouble, giving rise to a painful, dragging sensation, which had been to some extent relieved by a supporting bandage. Upon examination, the hernia was found to be about the size of a pint bowl, and a large, thick, soft neck could be detected, closely embraced by the external abdominal ring. That the hernia consisted of omentum only could be plainly perceived by its peculiar feeling, and this view was corroborated by the absence of all gastric symptoms. Repeated and prolonged attempts at reduction by taxis, both with and without the aid of ether, having proved ineffectual, it was deemed advisable to attempt the removal of the hernia by means of the knife. The patient having assented to an operation, an incision was made immediately below the external ring, two and one half inches long, through which the omentum was turned out. The mass proved to be six to eight inches in length, and weighed when fresh about one and one half pounds. The testis was adherent to the tumor by a single artery only, of medium size, which was twisted off. The adhesions formerly existing at the external ring proved to have been broken up by the manipulations made during taxis. The portion of the omentum having its seat within the ring was not condensed into a narrow neck, as is usually the case, but was folded together at this point, like a piece of puckered cloth, rendering it necessary to apply as many as nine ligatures. As these ligatures were tied one after another, and each ligatured portion of the omentum was cut away below, there occurred the only hæmorrhage of any account.

The patient made a rapid and complete recovery, the ligatures coming away on the seventeenth day. At the expiration of two months no trace of any rupture could be detected.

New Splint for Fore-arm. — DR. H. A. MARTIN read a paper[1] descriptive of a new splint, the invention of Dr. Farr, of New Hampshire, adapted to the treatment of fractures of the lower two thirds of the fore-arm. This splint, unlike others, recognizes the anatomical peculiarities of the arm, and treats the radius as a curved bone. Hence the apparatus, though simple and inexpensive, is peculiarly adapted for preventing any displacement of the fragments, and at the same time offers security against the spoon-shaped deformity

[1] Dr. Martin's paper was published in the JOURNAL for August 17, 1876.

at the lower extremity so often observed, and which occurs more especially after Colles's fracture.

School Children and Infection. — Dr. Joel Seaverns presented a report from the committee, to whom was referred the subject of School Children and Infection. The report drew attention to the settled conviction in the minds of physicians, that a large proportion of the cases of contagious diseases occurring among school children are directly traceable to infection received from their fellow-pupils in school. There are massed together in our public schools large numbers of children, at an age when they are especially susceptible to infection; and unless some general preventive system can be agreed upon by medical men and the friends of education, these localities must continue to be, what they now manifestly are, the chief foes of infection.

There are numerous reasons why the correction of this great evil should not be intrusted to the teachers alone. In the attempt to exclude infection, questions will inevitably arise, an intelligent and correct answer to which must demand special knowledge, such as the ordinary teacher cannot be expected to possess. Hence the necessity of a fixed code of rules, designed to exclude from the school infectious pupils, and pupils coming from infected homes. And even when such rules are adopted the opinions of medical men will be often necessary, to decide upon questions of diagnosis, the relative degree of danger from particular diseases, etc., etc. These hygienic measures would therefore, be much more efficiently and smoothly carried out under the eye of a medical inspector, to whose opinion much greater weight would be attached.

It is the proper object of all sanitary laws to protect the public interest by preventing people from endangering the health of others, through either carelessness, indifference, or ignorance. In the case of tenement houses and emigrant ships, laws have been frequently enacted to prevent the wanton sacrifice of life from a neglect of proper sanitary measures; and it is a striking anomaly that no measures have hitherto been adopted to prevent the wholesale propagation of the zymotic diseases among school children. It must indeed be admitted that the utility or efficacy of any such regulations must vary somewhat in different localities, depending upon the degree of intelligence of the parents. Hence in this, as in other matters of sanitary reform, it is essential that the public should be first educated to a proper appreciation of the importance of the rules; for no general sanitary measures of this character can be successfully carried out in the face of general ignorance and apathy.

There are three general principles upon which all restrictive rules designed to deal with infectious diseases should be based. These are: —

(1.) The isolation of the sick.

(2.) The interposition of a certain interval between the convalescence of the patient, and his return to school; to be enforced alike in mild as well as in severe cases of illness.

(3.) The disinfection of the sick room and its contents, and of the clothing of the patient.

The rules for the guidance of parents and teachers in these cases of infectious diseases, should be plain and specific. Moreover, as they will be brought to bear upon different and constantly varying types of disease, they should

have some latitude of application. They should be most strict in dealing with small-pox, varioloid, and scarlet fever, as the most formidable of the infectious diseases; diphtheria, whooping-cough, and measles, being less contagious, or less dangerous, will not require such rigid rules of exclusion.

The rules proposed by Dr. Seaverns were as follows:—

(1.) No teacher or scholar shall be allowed to attend school from any house in which small-pox, varioloid, or scarlet fever is prevalent.

(2.) No teacher or scholar shall be permitted to return to school from any house where the above-mentioned diseases have prevailed, until three weeks shall have elapsed from the beginning of convalescence of the patient. In case several individuals have been affected with such disease within the same house, the period of time must be reckoned from the beginning of convalescence of the last case.

(3.) No teacher or scholar shall be allowed to attend school who is affected with diphtheria, measles, or whooping-cough.

(4.) Teachers shall have authority to exclude temporarily from school any scholar who may be affected with other diseases or eruptions of a doubtful character. Such cases, however, shall be referred promptly to the school committee or medical inspector for further action.

It is the part of educational bodies, in conjunction with local boards of health or other sanitary organizations, to suggest and indorse specific rules framed to suppress this great evil. Upon physicians, however, falls the duty of awakening these bodies to a due appreciation of the magnitude of the danger, and also of impressing upon the community how essential is the existence of some such rules for the establishment and maintenance of public health, and especially for the welfare of the schools.

It was recommended, finally, with the view of securing a more effectual enforcement of the rules proposed, that medical men attending diseases of an infectious character should be compelled by legislative enactment to convey the earliest possible information of the appearance of such disease to the local sanitary authorities, by whom prompt measures should be taken to localize and destroy the contagion. An indefinite enactment of this sort already exists among our State statutes, but has never been enforced, except in case of small-pox.

The annual address was next delivered by Dr. P. O'Meara Edson. The address was a centennial retrospect of the progress made in certain branches of medicine, recalling numerous incidents in the early history of the profession, and embodying in conclusion an able plea in behalf of the claims of legitimate medicine.

THE TREATMENT OF IDIOCY.

THE twenty-ninth report of the Massachusetts School for Idiotic and Feeble-Minded Youth gives us an encouraging view of the progress that is making in this most difficult branch. This institution is the oldest in the country, and owes its origin to the charity and perseverance of the late Dr. Howe, who acted as superintendent till October, 1875. Dr. Jarvis is his successor, but

Dr. Henry Tuck, who is his assistant, writes the report, and is apparently in charge. We quote from the report of the trustees the following statement of the condition of the school, which it is important should be rightly understood: "The school was founded by the State, but for convenience in holding property and conducting the business affairs of the school, a corporation was created, and acts through its officers. But the concerns of the school are under the direct charge and oversight of a board of trustees, consisting of twelve persons, six of whom are appointed by the governor and council, and the other half are elected by the corporation, while the governor, lieutenant-governor, secretary of state, president of the senate, speaker of the house, and the two chaplains constitute a board of visitors, together with the members of the legislature during the session."

During the past year the trustees found it necessary to purchase a small lot of land, and to make some considerable repairs, for which they have been able to pay only in part, and it is hoped that the coming legislature will deal generously with the institution. Dr. Tuck's report is very interesting, and should be carefully read by any who may doubt that good can be done to idiot children. Really brilliant results are no doubt very rare, but an essential improvement is the rule. A large number of children can be raised above the level of beasts, and some be brought almost up to that of man. In this connection let us quote from Dr. Tuck's report: "This leads me to speak of one of our greatest wants; namely, opportunities for the best of our discharged pupils to obtain situations where they can support themselves wholly, or at least earn their board and clothes. There are in the school now several pupils who are kept along, hoping some situations may be found for them, so that they may not have to go back to the almshouses, from which they were originally sent to us. They could not of course go out into the world and earn their livelihood in competition with intelligent laborers; but in homes where they would be treated with humanity, and perhaps with kindness, the boys as farm-laborers, and the girls as domestics, would render good service, and, I doubt not, be fully worth their board and clothes. Some few would perhaps be able to do more than this, but none of them could get on without supervision, and the direction, restraint, and advice which perverse and willful boys and girls require, even when they have an average amount of brains."

Eighty pupils are now enrolled, among which are sixty-nine Massachusetts State beneficiaries (of whom eight pay from twenty-five to one hundred dollars a year, though only one the latter amount); the remaining eleven are private pupils, of whom six are beneficiaries from other States, one from Maine, two from Rhode Island, and three from Vermont.

We have received a circular stating that the superintendents of institutions of this nature throughout the country have formed an association to promote that branch of medical science, in which they are especially interested. To this end they request physicians to send them their views on the causes of idiocy, based on personal observation or trustworthy information. Dr. S. N. Kerlin of Media, Pa., is the secretary. If it be true that in the United States the proportion of idiocy is as high as one in one thousand, there is certainly plenty of material for investigation.

MEDICAL NOTES.

— Dr. William Playfair has received a summons to proceed to Malta, in order to be in attendance on the Duchess of Edinburgh at Malta during her approaching accouchement. — *London Illustrated News*, November 11, 1876.

Papers of November 26, 1876, say that the duchess has been delivered, at Malta, of another daughter.

— A new mask for filtering dust out of the atmosphere is reported in *The Popular Science Monthly* to have been devised by Dr. B. W. Richardson. Having tried various substances in order to find a good filter, he gives the preference to feathers. The advantages of feathers as filters of dust are: they are light, they separate perfectly, admitting air in any quantity while excluding dust, and they absorb less water perhaps than any other porous substance. They have the farther advantage of being cheap, and of being easily made up into filters. In constructing his mask Dr. Richardson connects the light feathers drawn from the leg-plumage of the pheasant along a line of tape. This band he wraps around the perforated breathing-tube of the mask, so that the feathers fall over the perforations. In inspiration the feathers come down over the perforations, filtering the air as it enters, while in expiration they are blown out from the tube as feather valves.

— The *Medical Examiner* of November 2, 1876, describes a successful case of gastrotomy performed by Professor Verneuil of Paris. The operation originated with M. Sédillot of Strasburg in 1849, and has since then been repeated fifteen times, always with a fatal result. In all previous cases it had been performed under very unfavorable circumstances, for the patients were worn out by incurable diseases, as cancer, long-existing stricture of the œsophagus, etc. M. Verneuil's patient, on the contrary, was in a very fair state of general health.

The patient, a mason's apprentice, aged seventeen, accidentally swallowed, on the 4th of February, 1876, a solution of caustic potash. The usual symptoms of acute inflammation of the œsophagus ensued, but were greatly relieved in fifteen days. The difficulty of swallowing, however, continued. He attended as an out-patient at several hospitals, but continued work up to the 31st of March, when deglutition had become so difficult that he was taken in at La Pitié. Here various efforts were made to pass an instrument into the stomach. It was invariably arrested at a certain point, not far from the cardiac extremity. The patient's strength was now rapidly giving way, and death from inanition seemed approaching, when the surgeon of La Pitié requested M. Verneuil to admit the youth into St. Louis, where he was received on May 24th.

The patient now exhibited the usual signs of extreme inanition — great emaciation, face pale and worn, temperature lowered, etc. Catheterism of the œsophagus revealed the existence of impassable stricture seven centimetres (2.73 inches) above the cardiac orifice of the stomach. External œsophagotomy seemed, therefore, inapplicable. Still M. Verneuil was reluctant to employ the extreme resource of gastrotomy. A remark of the patient, that he could swallow a little fluid towards evening, led the surgeon to suspect that

some amount of spasm might co-exist, as we find in cases of impermeable stricture of the urethra.

On June 25th, two drachms of chloral were thrown up the rectum, and, as soon as deep sleep ensued, M. Verneuil found that the small bougie passed into the stomach without any great difficuly.

On the following day, and for some time afterwards, the patient was able to swallow some broth, and even a little pap. Although the passage of the bougie excited very severe, though temporary, pain, the boy seemed to recover his strength gradually; but on July 10th the stricture again became impermeable. Even with the assistance of anæsthetics extreme debility ensued, the temperature fell to 35° and 35.6° (95°F. and 96°F.), and it became evident that without some operative interference death must soon follow.

Gastrotomy was therefore performed, under the influence of chloroform, on the 26th of July. Very minute antiseptic precautions were employed. An incision, inclining obliquely downwards and outwards, was made between the cartilages of the ribs on the left side, at an elevation corresponding to the assumed seat of the constriction. One small artery required ligature. The peritoneum was then carefully raised and divided with scissors. The stomach was now easily distinguished by its white color. It was then drawn forward between the lips of the external wound, and there temporarily fixed by two long acupuncture needles. This done, the portion of stomach so drawn forward was united to the edges of the wound at fourteen points by metallic sutures; the long needles were withdrawn, and the wall of the stomach was divided to a limited extent, sufficient, however, for the introduction of a large India-rubber bougie, which was kept fixed by a silver wire to the wall of the stomach. The length of the bougie placed in the stomach was 2.7 to 2.8 inches. The hæmorrhage which ensued on division of the highly-congested stomach was considerable, but was arrested by the usual means. The operation was not followed by any accident whatever, and, as soon as the sutures came away, the patient was able to swallow, as it were, some fluid nourishment.

On the 20th of August he was able to get up, and on September 10th he could remain up the whole day.

The fistula now presented what might be termed a healthy appearance, with its edges bordered by a fringe of smooth and red gastric mucous membrane. The appetite was good, and nutrition evidently reëstablished, for in one month he had gained 2¼ lbs., and on the 24th of October nearly 20 lbs. It is worthy of remark, that movements of mastication are excited whenever nourishment is injected into the stomach.

— Dr. William A. Hammond publishes in *The Ohio Medical and Surgical Journal* for October, 1876, notes relative to nocturnal incontinence of urine and its treatment. He says that he has found the following plan of treatment so efficacious that, though there are others which are at times followed by success, he has for several years past adopted it exclusively: —

(1.) Supposing the patient, as is generally the case, to be a child, the bladder should be emptied on going to bed, and then two or three times afterwards the patient should be taken up and again made to urinate.

(2.) Sleeping on the back should be prevented. The supine position is one which, of all others, increases the amount of blood in the cord, and hence augments its irritability.

(3.) The following prescription should be given for several months, three or four at least; if stopped sooner the affection is liable to return: —

℞ Zinci bromidi . . . . . ʒss.
Ergotæ ext. fl. . . . . ʒiv. M.
Ft. sol.

Dose, ten drops three times a day, increased five drops every month. Thus for the first month ten drops are taken three times a day; for the second month, fifteen drops three times a day; for the third, twenty drops, and so on. It is preferably administered after meals, being less apt then to excite nausea or vomiting. Should either of those symptoms prove troublesome, the ensuing two or three doses may be somewhat smaller.

Children of from four to twelve years of age can take the foregoing quantities without disturbance of the general health, and even for adults it is not often necessary to increase them except in the way of augmenting the doses by five drops every two weeks instead of every month.

In cases, however, where the bromide of zinc is not well borne, the bromide of iron may be substituted. It should be given in the form of a syrup, in doses beginning with five grains three times a day, gradually increased to fifteen or twenty.

℞ Ferri bromidi . . . . . ʒi.
Syrupi simplicis . . . . . ʒvi.

A teaspoonful of the syrup, made according to the above formula, contains about ten grains of the bromide of iron. The dose, therefore, to start with, is half a teaspoonful three times a day, increased gradually, till at the end of three or four months the patient is taking a teaspoonful and a half or two teaspoonfuls of the medicine. With each dose of the bromide of iron the fluid extract of ergot should be given separately, and like it should be gradually increased from ten drops three times a day to a drachm as often. The two medicines cannot be kept mixed together for any length of time without the bromide of iron being decomposed and the ergot also injured.

LETTER FROM PHILADELPHIA.

MESSRS. EDITORS, — The International Medical Congress is still a subject of congratulation. Everybody is delighted with its success, none more so than those who were active in managing its machinery. Philadelphia physicians, including the whilom croakers, will not soon tire of recalling its perfection. The pleasant things which are said of it, and of Philadelphian hospitality, on the other side of the water only add to the general satisfaction. In my letter in your issue of September 21st, I ought to have said that the smoothness and system of the morning meetings depended in no small degree upon the very efficient readiness and intelligence of the general secretary, Dr. I. M. Hayes.

Mention of the congress reminds me of Dr. Dalton's response to a toast at the subscription dinner given during its progress. In the course of the response Dr. Dalton referred to Dr. Woodward's earnest request that physicians would send to the National Library at Washington any book or books of whatever sort, which have a bearing on medicine. Dr. Dalton said he thoroughly sympathized with Dr. Woodward in his desire to increase the value and swell the size of the library, and since Dr. Woodward expressed his willingness to accept anything in the shape of medical literature, he had at once secured a medical treasure which he proposed to send to the library; indeed, he had brought it with him. He hoped it would be rightly valued, carefully treasured, and kept ever at the service of those seeking information; whereupon he drew forth a little blue-covered pamphlet, saying that all present would agree with him as to its pricelessness when he informed them that it set forth the virtues of the *Ague-pad.* He then delivered the precious work to Dr. Woodward, who received it with great *empressement*, clasping it to his heart, fervently promised to prize it, to hoard it carefully, and expressed his heartfelt gratitude not only for the gift, but for the promptitude with which Dr. Dalton had responded to his appeal for books.

The winter sessions of the Philadelphia medical schools opened with unusually large classes, the University having over three hundred, and Jefferson College more than five hundred students, some of them, of course, being physicians. Nobody attempts to explain this greatly increased attendance except perhaps by the extreme dullness in business of every nature. I believe it is the general experience of medical schools that when "hard times" come there is a rush of young men into medicine; as if they said, "There is nothing else to do, let's be doctors." You may have heard the story of Sir Walter Scott's colloquy with a grave, sagacious-looking doctor, attired in black, for whom, in a small English town, Scott had sent on behalf of his sick servant. In the doctor Scott, to his amazement, recognized a Scottish blacksmith who had formerly practiced as a veterinary operator. "How in the world," exclaimed Sir Walter, "came you here? Can it be possible this is John Lundie?" "In truth it is, your honor, just a' that's for him." "Well, let us hear. You were a horse-doctor before; now it seems you are a man-doctor. How do you get on?" "Ou! just extraordinar' well; for your honor maun ken that my practice is vera sure and orthodox. I depend entirely on twa simples." "And what may their names be? Perhaps it is a secret." "I 'll tell your honor" (in a low tone), "my two simples are just laudamy and calamy." "Simples with a vengeance!" replied Sir Walter. "But, John, do you never happen to kill any of your patients?" "Kill? Ou, ay. May be sae. Whiles they dee, and whiles no; but it's will o' Providence. Onyhoo, your honor, it will be lang before it makes up for Flodden!"

The Jefferson College clinical hospital will soon be completed. It is a beautiful building, and will be most complete in arrangement. I shall have more to say about it before long.

On dit, the clinical professors in the University medical school are insisting upon remuneration, and also a share in the final examination of the students.

The centennial hospital physicians have treated between six and seven thousand patients since the 10th of May. The term of service of the staff, which formally terminated on the 10th of November, has been extended one week, because the grounds and buildings will remain open and the admission fee will be received until the 18th. More than four hundred regular physicians from all parts of the world visited and recorded their names at the hospital during the Exhibition.

It is now somewhat late to deny the fabricated reports of certain New York papers concerning the hygienic condition of Philadelphia. Many cases of illness said to be due to the effect of Schuylkill water and of the ill-drained grounds, and hotels about them, were chiefly caused by the irregular habits and unwise over-exertion of visitors, to which may be added their foolish habit of nibbling at every turn, and their intemperate use of iced water, lemonade, soda-water, and cider. The health of Philadelphia was never better, but in common with cities in all portions of the country our city has to a slight degree felt the effects of a mild epidemic of malarial and typho-malarial ailments, which were of exceedingly brief duration, and had no apparent effect upon the death-rate of Philadelphia. The total number of visitors has been in no-wise influenced by the malicious and false sensational articles, notably of the *New York Herald*. The Exhibition has proved a grand success. The board of finance are out of debt and have a splendid surplus of funds. The stockholders may hope for a dividend of at least eighty per cent.

In a collection of old books recently sold at auction here, I found a lecture by Dr. John Leake, of London, in an excellent state of preservation. It was a lecture introductory to a course on obstetrics, and was delivered on the 4th of October, 1773. The brochure includes a copper-plate engraving of obstetric forceps invented by Leake. These forceps have three blades, the third blade acting as does the vectis of to-day. Leake united it with the forceps with the view of changing its fulcrum from the pubes to the lock point of the forceps, and thus sparing the pubes the danger of injury. Leake gives an interesting history of the vectis, or lever, as he terms it. I presented the work to Dr. William Goodell, who, although as profoundly read in the literature of obstetrics as any man in his specialty, told me he had never before heard of the three-bladed forceps of Leake.

I trust you have not been annoyed in Boston by an individual who called himself Dr. Atkinson. He made his appearance in Philadelphia during the week of the congress, pretended to be a delegate from Holland, and claimed to be accoucheur to the queen. He introduced himself to Director-General Goshorn as vice-president of the centennial medical bureau (there being no such office), and threatened to make a disturbance in the medical congress concerning the drainage of the Exhibition grounds. Mr. Goshorn questioned various foreign consuls and commissioners about the *soi-disant* Atkinson. No one knew him. The man obtained money on various false pretenses, forged, and was finally arrested as a deceiver.

There has been in Philadelphia, within the past three weeks, another example of gangrene as a rare and curious complication of saccharine diabetes. The primary ailment was chronic, and the gangrene became developed only a

few days before the fatal termination. Charcot several years ago described this secondary effect of diabetes mellitus, and there have been four or five examples of it in Philadelphia. Hence the gangrene can hardly be considered a coincidence.

PHILADELPHIA, *November* 14, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING NOVEMBER 25, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	413	20.24	29.35
Philadelphia	825,594	286	18.01	22.24
Brooklyn .	506,233	172	17.67	24.92
Chicago . .	420,000	168	20.80	19.75
Boston . .	352,758	116	17.11	26 20
Providence	101,500	25	12.81	19.02
Worcester .	51,087	12	12.21	20.91
Lowell . .	51,639	19	19.11	20.55
Cambridge	49,670	28	29.31	23 31
Fall River	50,372	11	11.35	23.99
Lawrence .	36,240	9	12.91	25 96
Lynn . .	33,548	5	7.75	19.23
Springfield	32,000	9	14.62	20.93
Salem . .	26,344	19	37.50	22.92

Normal Death-Rate, 17 per 1000.

BOOKS AND PAMPHLETS RECEIVED. — Nutrition in Health and Disease. By James Henry Bennet, M. D. Second Edition. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Clinical Studies. By Sir John Rose Cormack, K. B., F. R. S. E., M. D., etc. In two Volumes. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

A Treatise on Hernia. By Greensville Dowell, M. D. Philadelphia: D. G. Brinton. 1876.

Lectures on the Physical Diagnosis of Diseases of the Heart. By Arthur G. Sansom, M. D. London: J. and A. Churchill. 1876. (For sale by A. Williams & Co.)

The History of Spontaneous Generation. By Edward S. Dunster, M. D. 1876.

Medical Libraries of Boston. By J. R. Chadwick, M. D. (Reprinted from The Boston Medical and Surgical Journal.)

Contributions to Reparative Surgery. By Gurdon Buck, M. D. New York: D. Appleton & Co. 1876. (For sale by A. Williams & Co.)

On Coughs, Consumption, and Diet in Disease. By Horace Dobell, M. D., etc. Philadelphia: D. G. Brinton. 1877.

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THE ORIGIN AND CAUSES OF NEAR-SIGHTEDNESS.

EXTRACTS FROM A NEW WORK BY PROFESSOR ARLT, OF VIENNA.

TRANSLATED BY HENRY W. WILLIAMS, A. M., M. D.,
Professor of Ophthalmology in Harvard University.

A CONCISE monograph [1] has been published this year by Professor Arlt, so remarkable for its clearness of demonstration, precision of argument, candor, and good judgment, that I have made a translation of some of its important points which I hope may be acceptable to readers of the JOURNAL. Remarks of my own would be superfluous, except to add that the practical conclusions of the author deserve the earnest attention of the profession and the public.

Near-sightedness, or myopia, as a permanent condition of refraction of the eye in which parallel rays are brought to a focus before they reach the retina, usually depends upon an elongation of the globe from before backwards, lengthening the antero-posterior axis of the vitreous, increasing the bulk of the latter by serous effusion, and thus crowding back and thinning the sclera, choroid, and retina.

In moderate and high degrees of myopia we find a striking alteration in the sclera, which becomes distended and thinned, the thinnest portion being, as a rule, at the posterior pole in the vicinity of the macula lutea. The choroid is also pressed backward and expanded, and at the temporal side of the optic papilla the changes take the form of a crescent, its concave border blending with the papilla, whilst its convex edge extends more or less towards the macula lutea. This change must be regarded as an atrophy of the choroid. Similar alterations in the retina have not as yet been clearly demonstrated anatomically, but my opinion that the retina is distended and its elements are thus separated from each other has been accepted by Donders, Ed. Jaeger and others. In fact Horner and Iwanoff have observed an oblique position of the rods and cones in the sensitive layer of the retina.

Before the manifestation of near-sightedness, which is most frequently between the ages of ten and sixteen, seldom as early as the fifth or sixth

[1] Ueber die Ursachen und die Entstehung der Kurzsichtigkeit.

year of age, we may suspect a predisposition to it, from a general resemblance of the individual to parents or to other members of the family who are short-sighted; but its development cannot be predicted with certainty until the special symptoms appear. As in many other hereditary conditions and diseases, myopia may be more readily and fully developed by external causes.

Congenital near-sightedness is as yet not proven; but the myopia of newborn infants depends on the greater convexity of the crystalline lens.

Predisposition to myopia — but not the condition itself — is often inherited; but myopia may often be originated where no hereditary tendency existed. Among several brothers and sisters in whose family there has been no near-sightedness, only those become myopic who tax the eyes unduly in their youth. I myself have been myopic $\frac{1}{24}$ since the age of sixteen or seventeen. Neither my parents nor grand-parents were so in the slightest degree. At thirteen I had excellent vision for far and near, but after four years of close study I noticed, during the vacations, that I could no longer recognize objects which I had formerly seen at a distance of a league. Thenceforward I thought it necessary to be careful, and my myopia has remained stationary because I began in time to avoid injurious use of my eyes. Of five brothers in a family I know, in which there had been no trace of myopia, three, who were workmen, have never shown any near-sightedness. The other two studied medicine; one of these first discovered that he was myopic whilst at the university. After graduation he devoted himself to active practice in a country district, and can now see well with concave glasses $\frac{1}{4}$. The second, after obtaining his degree, devoted himself to science and has obtained a world-wide reputation; but unfortunately his near-sightedness, which began at twenty years of age, has greatly increased; and he was compelled, soon after reaching his sixtieth year, to resign his position as professor, because his eyes, which had reached the degree of myopia $\frac{1}{4}$, could no longer read continuously without pain.

Near-sightedness is not primarily developed after about the age of sixteen. If supposed to have begun later it is probable that its real commencement had not been observed. Only those eyes become myopic which were originally normal, or, at most, slightly hypermetropic. It is possible that young eyes, moderately hypermetropic, may become normal by the natural processes of growth and may afterward undergo myopic changes.

The growth of the eyes ends at about the age of puberty, or certainly as soon as the twentieth year. From this time normal or hypermetropic eyes remain almost unchanged in form until old age, but highly myopic eyes are an exception to this rule.

caused young near-sighted persons to look at near objects,

whilst he examined by the aid of suitable glasses the venous circulation within the eye; then suddenly relaxing the accommodation by having them look at far objects, he saw clearly that the calibre of the veins was increased, thus proving that they had been subjected to greater pressure in looking at near than at far distances. The reason why this intra-ocular pressure causes a giving way of the sclera near the posterior pole of the globe is found in the fact that the juvenile sclera is still tender and dilatable, and is supported, in this region, only by loose cellular and fatty tissues, and not by the ocular muscles or their tendons.

Let us now inquire what consequences are to be expected when continued work upon near objects has given rise to congestion of the circulation, increased intra-ocular pressure, and thinning of the posterior wall of the globe. If this too continuous use of the eyes is suspended, the sclera may recover its tone; but if the resumption of work renews the distension before the dilated membranes return to their normal state, or if the stretching goes beyond certain limits, the sclera, choroid and retina do not fully recover their normal condition, and the intra-ocular vessels continue for some time engorged. If this state of things exists for some hours daily, a serous exudation may occur, increasing the bulk of the vitreous and lessening its consistence.

If we would hinder the production and prevent the increase of myopia, we must not only be careful that youthful eyes are not overtasked with work upon small objects, but must also see to it that in the intervals of study, etc., opportunity is given for recreation and practice in looking at objects at a distance. The numerous expedients for averting near-sightedness are nearly all directed against overwork, insufficient light, bad print, etc., during school hours. But when we see children four or five years old allowed, especially in their convalescence from measles, scarlatina, and other diseases, to amuse themselves for hours with objects which, on account of their small size, must be held very near the eyes, or in pencil drawing (for which the mistaken parents delight in observing a talent), and this too often in badly lighted rooms, we cannot but suspect that the seeds of near-sightedness are already sown. In large cities, even during the favorable years of childhood, there is but little recreation in the open air, and there are few games which require looking at remote objects, or the estimation of distances by the eye. The eyes of the little ones thus become restricted to a limited range of vision.

I would therefore repeat that I regard the practicing the eyes in looking at distant things during the early years of childhood as no less important than a rational limitation of the amount of their use in reading, writing, and such occupations, and frequent interruption of this use, or at least a systematic change in the kind of occupation. As the want

of opportunity in cities for free muscular exercise is compensated for by gymnastics, so the eyes should not only have time for rest, but should also be trained in both far and near seeing, and thus be symmetrically developed.

15 Arlington Street, *December* 9, 1876.

UNFORTUNATE RESULT OF VACCINATION.

BY Z. B. ADAMS, M. D.

On the 1st of October, 1876, a package of ivory points, charged with fresh cow matter, was procured of reputable vaccine purveyors, and used as follows: —

Three children were inoculated, namely: No. 1. A healthy boy twenty months old, of healthy Irish parents; a first vaccination. No. 2. A pale, rather large infant, whose mother is consumptive; age, one year; of Irish parents; a first vaccination. No. 3. A healthy infant four months old, born of Irish parents.

In these, and in all the cases cited, the matter was carried without delay from where it was got to the arm in which it was placed. The rest of the points in this package were given to a neighboring physician, who used them without effect.

No result occurring in any of the children inoculated with the points in this package, on October 21st a similar package of fresh cow matter was procured from the same parties. This package was used and distributed in the same manner as the first, and the result, so far as known, was null, except in cases No. 1 and No. 2.

In No. 1, on the seventh day, three dry scabs were found upon the points of inoculation, and the skin around showed a scaly epidermis, indicating a short-lived hyperæmia or slight inflammation.

In No. 2 there was a little redness of the skin on the third and fourth days, at the seat of inoculation, which, however, had entirely disappeared on the seventh day.

I am thus particular in stating these facts, as it is possible, although not probable, that the previous attempts at vaccination may have some bearing upon the unfortunate result of the third trial.

A package of human matter, warranted pure and fresh vaccine virus, was now procured from the same parties as before, with which were inoculated Nos. 1, 2, and 3, each in three places on the arm at about the insertion of the deltoid. The remainder of the package was thrown into the fire. The result was as follows: on the seventh day No. 1 presented three very perfect-looking vaccine vesicles, of the ordinary size and shape, round, cupped, with a thin scab just forming in the centre, surrounded by a pellucid ring of pure lymph, with slight areolæ of

redness, and without deep induration; in short, a healthy arm. Matter was taken for No. 4.

No. 3 presented one vesicle like those just described in No. 1, somewhat smaller in size. Some lymph taken from it was introduced into the arm lower down, and some was also introduced into the arm of No. 2, which had not taken, and showed no marks of the previous attempts.

On the fourteenth day, No. 1 had marked symptoms of purulent infection. Deep black sloughs occupied the site of the vaccine vesicles; there was brawny hardness of the whole deltoid region, a huge diffuse abscess reached from the axilla to the lower border of the ribs, with hard infiltration extending to the sternum in front, and below the scapula behind, showing a waxy whiteness with distended veins. A thin ichor flowed from large incisions and no pus. This child died of pyæmia on the twenty-first day. There was no autopsy.

No. 3 showed two perfect vaccine scabs with no signs of inflammation, both scabs being apparently of the same age, although the lower one resulted from inoculation by lymph taken from its fellow on the seventh day.

No. 2, inoculated for the fourth time with fresh lymph from No. 3, as above stated, and now at the seventh day, presented three large, unhealthy, irregular sores, following the scratches of the lancet. There was no clear lymph, but some yellow pus, deep induration of the whole deltoid region, and tenderness and enlargement of sub-axillary glands. This child was vaccinated from an infant who, both at the seventh and fourteenth days, showed the vaccine disease in its most regular form, without induration of the tissues, or tenderness and swelling of glands in or about the axillary region. But it should be remarked that this child (No. 2) had a somewhat scrofulous look, and a mother who was phthisical.

No. 4 is a healthy infant, of healthy American parentage, six months old, and living under the best sanitary influences. It was inoculated from No. 1, with apparently healthy lymph; the result in every essential particular was the same as in No. 2, just described, namely, there were large, unhealthy-looking sores, spreading in the scratches made by the lancet, and inclined to burrow, with extensive induration of the arm, and some constitutional disturbance; yellow pus instead of pure lymph on the seventh day, and enlargement of the sub-axillary glands, tending to suppuration. The sores, in both Nos. 2 and 4, became large excavated ulcers on a hardened base.

This virus was of course abandoned.

ULCER OF THE FRENUM LINGUÆ IN WHOOPING-COUGH.

BY ELBRIDGE G. CUTLER, M. D.

In the JOURNAL of July 6, 1876, mention is made of a communication by Thomas Morton, M. D., to *The British Medical Journal* of June 10, 1876, on ulcer of the frenum linguæ as a new symptom in whooping-cough. In the next issue H. C. called attention to the fact that Bouchut had, as early as 1858, mentioned this ulcer. Before this, in 1844, the characteristic ulceration was noticed in Germany by Amelung, Braun, Bruch, Zitterland, Liersch, Schmidt, and ten years later by Gamborini, of Italy.[1] In his text-book on children's diseases, fifth edition, 1871, Vogel says that it had long been known in Germany, and nearly forgotten until attention was again called to it by Gamborini, of Milan. The recent German text-books of Steiner and others mention this ulceration, and attribute it to its proper cause. The late English and American publications to which I have had access do not mention it, though doubtless their authors are not unaware of its occurrence. MacCall,[2] in an epidemic in Manchester in 1869–70, found this ulcer in forty-four per cent. of the cases brought to the dispensary of the Children's Hospital. This proportion he thinks too small, as a number of cases were examined in the first week of the disease. Gamborini found it in fifty-six per cent., and according to him it appears usually about the second week.

Though the complication was not, except so far as Dr. Morton was concerned, a newly-discovered one, the statistics were interesting, and I have been led to make observations at the Boston Dispensary during a three months' service in the children's room, this summer. The result I venture to give to the profession through the medium of the JOURNAL, premising with the remark that, as the patients were out-patients, I did not see the cases in the initial stage, and could not always follow them up so well as I could have desired.

In eighty cases of children with at least two lower incisor teeth and without cough, taken at random, there was no ulcer.

In one hundred and thirty-six cases of children with bronchitis, all with teeth, six under four years of age were found with an ulcer of the frenum linguæ, namely: —

One, a case of severe bronchitis of two weeks' duration.

One, a case of severe bronchitis of two weeks' duration, which had become worse.

One, a case of severe bronchitis of several weeks' duration.

One, quite a severe bronchitis of three weeks, with occasional vom-

[1] MacCall, Glasgow Medical Journal, February, 1871. American Journal of Medical Sciences, April, 1871, page 564.

[2] Loc. cit.

iting; there were but two lower incisor teeth; cough not to be excited by ordinary irritation; large ulcer, size of coffee kernel.

One, a severe case of two weeks' duration; no vomiting; no cough on irritation.

One, a cough for two weeks; said to have had pertussis during early summer, which disappeared and left the child free for a time; on September 15th, a very slight ulceration; occasional vomiting; paroxysm could not be induced.

That is, in 4.41 per cent. of the cases there was ulcer, which occurred only in children under four years of age, whose lower incisor teeth are notoriously sharp.

Twenty-eight cases of pertussis were seen, sixteen with ulcer, and twelve without.

Cases with Ulcer.	Cases without Ulcer.
1 first seen in third week.	1 first seen in fifth week.
1 " " after several weeks.	1 " " in third "
1 " " " " "	1 " " in fifth "
1 " " in third week.	1 " " after several weeks.
1 " " " " Bronchitis of longer duration.	1 " " in second week (no teeth).
1 " " in second " " " "	1 " " in first week; no ulcer after four weeks.
1 " " in third " " " "	1 " " in fifth "
1 " " " " " " "	1 " " in fourth week.
1 " " " " " " "	1 " " after several weeks.
1 " " " "	1 " " " " "
1 " " in fourth "	1 " " in third week (no teeth).
1 " " in third week. Bronchitis three weeks earlier.	1 " " " "
1 " " in sixth week. Quite large ulcer; child had lung complication and much fever and prostration.	
1 " " in sixth week.	
1 " " " " Mucous membrane just whitening. When first seen, in third week, there was no ulcer; it developed under observation, however.	
1 " " in fourth week. No ulcer on frenum, but one on the tongue, over the left canine tooth, which was carious and had a sharp crown; lower incisors very short and nearly gone with caries.	
16	12

In a percentage of 57.14 of the cases ulcers were observed. The oldest child was ten years, the youngest six months. But two cases ought to be excluded from the list of those in whom no ulcer was found as there were no teeth in either. This makes the percentage 61.53.

The ulcer appears to commence by superficial laceration of the mucous membrane, which under continued irritation deepens, and the cells become granular and enlarged, while the surface soon takes on a whitish, macerated appearance. At this time a proliferation of cells, which are not unlike leucocytes in appearance and behavior, is taking place. The ulcer is transverse with regard to the frenum at its beginning, of oval shape, and is longest in the horizontal diameter; it is situated about midway between the orifices of the Whartonian ducts and the extreme front end of the frenum in very young children, a trifle nearer

the orifices of the ducts in older children; it has no tendency to increase beyond a certain size, and heals spontaneously as the cough diminishes, leaving a whitish cicatrix behind. In other words, the situation and shape are such as to lead one to believe that it is primarily due to some mechanical action, and as the ulcer always perfectly corresponds to the two middle lower incisor teeth, except as in the one instance given,[1] it is fair to presume that the undue and oft-repeated powerful dragging down of the tongue on to the lower teeth, induced by the paroxysms, has given rise to this complication, as has been explained by the writers quoted.

In proof that this may be a cause, I need only recall to mind first attempts at laryngoscopic examination, when patients frequently complain of the tongue being too forcibly pulled down on to the lower teeth so as to cause laceration of the mucous membrane; I was able to produce an ulcer on my own frenum by voluntarily and frequently pulling down the tongue, in the manner which is seen to take place in violent paroxysms of coughing in young children.

My excuse for spending so much time in the explanation of an obvious matter is the fact that a recent writer in the London journals has sought for some other cause.

THE METRICAL SYSTEM IN PRESCRIPTIONS.

BY ALBERT N. BLODGETT, M. D. HARV.

THE experience of the past six months has done something to show the difficulties attending the introduction of the metrical system of weights and measures into the practice of physicians in prescribing. Since the action of the Massachusetts Medical Society in June last in favor of this system, several physicians of Boston have employed it, and it seems to be gaining favor with both doctors and druggists. Several articles have from time to time appeared in the various journals, aiming toward assisting in the introduction of the new method, but some of these seem to add to the difficulty instead of lessening it. Among these a recent article by Prof. John M. Maisch, of Philadelphia, which has appeared in both medical and pharmaceutical literature of a recent date, bearing the title Metrical Weights in Prescribing, seems to call for some comment. After remarking upon the varying value of the *grain* in different countries as a unit of weight, Professor Maisch says: "The pharmacopœias of Continental Europe and the prescriptions of physicians in those countries express all quantities by weight only, whether the material directed be solid or liquid;" and he urges the necessity of employing weights alone in dispensing medicines of the most varying density: as water, chloroform, alcohol, glycerine, ether,

[1] MacCall made a similar observation.

sulphuric acid, etc. After referring to the relative strength of tinctures, etc., Professor Maisch touches upon the fact that liquids of varying densities will represent very different *volumes* at a given weight of each, and by mathematical calculation founded upon the specific gravity of these different substances he deduces the weights of these substances which would yield a certain *volume*, the equivalent of a certain fixed volume of water, say one tablespoonful, which weighs about fifteen grammes.

He finds that it requires—

11.25	grammes	of ether	to equal	15	grammes	of	water	in volume.
18.75	"	glycerine	"	15	"	"	"	
22.50	"	chloroform	"	15	"	"	"	
12.	"	spts. etheris. nit.	"	15	"	"	"	
20.	"	syrup	"	15	"	"	"	

and in this ratio to each other must the weight of these articles be calculated. This would seem to entail upon the physician a large amount of unnecessary labor, for in addition to his existing cares he must now charge his memory with the specific gravity of each and every liquid in his pharmacopœia, as these must be prescribed, each at a different weight, to make a certain volume. In pharmacy this may find a useful application, but it would seem to be a burden in prescribing. Probably few doctors would care to adopt so laborious a system.

In prescribing spts. lavend. comp., the physician does not trouble himself to make a mental abstract of the grains of all the components in the dose he prescribes. In giving ol. ricini nobody estimates the dose by its absolute weight in grains on the scale. The guide which most physicians follow in prescribing liquids is the volume of the liquid employed; and this principle finds a ready and simple application in the metrical system as adopted in the larger universities and hospitals of Europe where this system is in use, as well as in the hands of scientific men generally in those countries — a fact which I am sorry Professor Maisch has overlooked.

Let us see how the system of weights and measures are obtained. First, the metre, the unit of length, is divided into one hundred parts or centimetres; the centimetre cubed becomes the cubic centimetre, a unit of volume. This volume of distilled water at its greatest density weighs 15.434 grains troy, and is established as the unit of weight, the gramme. In volume it equals 16.2318 minims or about quarter of a fluid ounce.

One thousand cubic centimetres form the litre, and thus large quantities of liquid may be estimated. If all liquids possessed but one density, and therefore one specific gravity, then the gramme in weight of any liquid would equal the cubic centimetre in volume, but this not being the case, the same weight in many instances would yield different volumes. To render this system practical for the physician who does

not deal with fixed quantities as does the pharmacist, the cubic centimetre is used for liquids which are therefore prescribed by volume; the gramme for solids which are prescribed by weight, as only in this way do we obtain a useful system. There is an approximation of the metrical to our old system which renders it easy to make a mental calculation from one to the other: thus, 1 gramme equals 15.434 grains; for all practical purposes one gramme equals fifteen grains and four grammes are nearly equal to an ounce; 0.06 gramme is nearly the equivalent of one grain.

In liquid measure thirty cubic centimetres are nearly equal to a fluid ounce; four cubic centimetres to a fluid drachm; therefore: —

℞ Potassii bromidi		iij.	=	℞ Potassii bromidi		grammes 12.0
Syrupi simplicis	āā	ʒij.		Syrupi simplicis	āā	c. c. 60.0
Aquæ destillatæ				Aquæ fontanæ		

Which is written

℞ Potassii bromidi		12.0
Syrupi simplicis	āā	60.0
Aquæ fontanæ		

It will be readily seen that if the last two articles were dispensed by weight instead of by volume, the syrup would fall short and the mixture would measure less than intended. The druggist is expected to know how to dispense the articles without the special signs gmm. or c. c., and to understand solids as prescribed in grammes and liquids in cubic centimetres. Another recommendation for this system is that an incompetent pharmacist is totally unable to fill a prescription written in this way, unless, indeed, he use grains for liquids and solids, a mistake which has occurred several times within my experience. We may also feel sure of better drugs from a pharmacist educated to use this system than from one who has acquired his experience as a trade learned from his master.

The metrical system, therefore, seems to offer the following distinct and definite advantages. It dispenses with the signs of the quantities; it employs Arabic figures instead of Roman numerals; it assures the physician of more competent service from the pharmacist, and of a better quality of medicines; and, last but not least, it reduces considerably the danger of mistakes on the part of physician and of druggist.

RECENT PROGRESS IN SURGERY.

BY J. C. WARREN, M. D.

Subcutaneous Osteotomy. — The recent improvements in the operation of division of the upper extremity of the femur for anchylosis of the hip-joint were set forth in a paper read by Mr. Maunder before the Clinical Society of London in May last. In the *Medical Times and*

Gazette for July 22, 1876, is an account of two operations performed by Mr. Maunder by the new method, which appears to be much more easily carried out than the old one, where a fine saw was used for dividing the bone, as recommended by Mr. Adams. Two patients were submitted to this treatment; one was a young girl who for about seven years had been unable to put her foot to the ground. Disease of the hip-joint had ended in fibrous anchylosis, with the thigh fixed at an angle of one hundred and eighteen degrees with the trunk. Thomas's splint had been tried for several weeks with the view of gradually straightening the limb, but no improvement whatever had resulted. The other patient was a young man of fine proportions and well nourished, who had been sent up from Plymouth with the express object of undergoing the operation. Disease of the left hip-joint had supervened upon fever, and had ended in fibrous anchylosis with the leg at right angles with the trunk. Before commencing the operation, an assistant standing in front of the patient drew forwards the soft parts. Mr. Maunder then measured the distance from the top of the trochanter major to the shaft at a level immediately below the small trochanter — this spot being selected because it is the highest beyond the attachment of the numerous muscles which are inserted into the upper end of the femur. At this spot (and while the soft tissues are well drawn forwards) he inserts a double-edged knife down to and at right angles with the bone on the outer side of the limb, cuts through the periosteum, and then, before removing the knife, introduces the chisel, which is also kept at right angles to the axis of the shaft of the femur. With a light wooden mallet the chisel is driven well into the bone, then partially withdrawn, to be again driven onwards, inclined somewhat obliquely forwards, and then backwards, so as to divide the bone in the rest of its thickness. While doing this the hand of another assistant is pressed upwards against the inner surface of the thigh, so as to make counterforce to the direction of the penetrating chisel. Finally, the limb is gradually and carefully extended, any small portion of bone which may happen to have escaped the chisel being at the same time broken down; lastly, a straight interrupted outside splint is applied.

The chisel — a separate one for each case — used by Mr. Maunder is three eighths of an inch in width at the cutting edge, where it is wider than elsewhere, and three inches and a half long in the shaft. The operation is attended with next to no hæmorrhage, and the small wound in the soft tissues through which the chisel has been worked becomes valvular and air-tight as soon as the tissues themselves are allowed to fall backwards into their natural position. A minute or two was the time required to complete the division of the bone in the case of the girl; in that of the man the process was longer, owing to the greater thickness and toughness of the bone.

In three cases in which the operation had been performed several weeks previously, the patients were already able to walk, — one man without the aid of stick or crutch, — with limbs in nearly perpendicular positions, and with little or no lordosis. There necessarily, however, remains some deformity about and around the hip-joint. This is easily understood when it is remembered that there is anchylosis at an angle, and in some cases it has followed so-called dislocation from disease; while, as the division of the femur is made below the small trochanter, there is no attempt to correct the abnormal position of the upper extremity of the bone.

Mr. Maunder stated that in most of his cases there has been no suppuration whatever after the operation, and that it was very limited indeed in the case in which it occurred. This entirely coincides with the experience of Professor Volkmann, who also has employed the chisel instead of the saw. Professor Volkmann, however, used three chisels of different thicknesses to prevent the jamming and sticking fast in the deeper parts of the incision into the bone. The superficial part was divided with the stoutest, the deeper with a thinner, and the deepest with the thinnest instrument of all, so that the cleft was slightly wedge-shaped. Mr. Maunder, by a modification of the form of the chisel, finds it unnecessary to use more than one instrument.

The instrument used by him is called a carver's "cold" chisel. At a recent meeting of the Clinical Society[1] Mr. Maunder reported all of the cases operated upon in this way, seven in number; six of these had been done to correct deformity after hip-joint disease, and one when the shaft of the femur had been divided about its middle to correct deformity following mal-united fracture in a man aged thirty. In two of the earlier cases slight suppuration had taken place, while in the other five the wounds healed as in tenotomy, the patients getting about from six to eight weeks after the operation.

This method has been employed by Billroth in rachitic deformities of the leg, and in club-foot. In a case recently reported[2] this operation was performed upon both tibiæ of a young man eighteen years of age with success. All straightening gained is immediately secured and maintained by a plaster of Paris dressing. Dr. Ashurst of Philadelphia has recently divided the neck of the femur on one side of a young person after Adams's method, and on the other side, below the trochanter, after Gant's method, the patient making a rapid recovery.

Gastrotomy. — A successful case of gastrotomy for stricture of the œsophagus has been reported recently by M. Verneuil, of Paris. An account of this operation will be found in the JOURNAL, December 7, 1876.

[1] The Lancet, October 28, 1876.
[2] The Medical Record, No. 314, 1876.

Partial Resection of the Stomach.[1] — This operation was originally suggested by Merrem, in 1810, in a cancer of the pylorus, and the operation was practiced by him on three dogs, of which one died the next day, one at the end of twenty-two days, and one at the end of twenty-seven days.

The authors of this paper endeavored to determine by experiment, first, whether extirpation of the pylorus was necessarily fatal; and, second, whether there were cases in which cancer of the pylorus could be entirely removed by this operation without danger of return or of generalization of the disease. Gastrotomy was performed, for this purpose, on seven dogs, and in each case a circular portion of the pyloric extremity of the stomach was removed. There were two methods of doing this suggested: either to produce adhesion of the stomach to the abdominal wall and subsequently to reach the disease without opening the peritoneal cavity, or to resort to simple gastrotomy. The latter method was employed. An incision was made from the tip of the xiphoid cartilage to the umbilicus, the pylorus was drawn through the wound, and the portion removed while the divided ends of the pyloric portion and the duodenum were held firmly closed by an assistant, to prevent the escape of their contents into the abdominal cavity. The divided surfaces were then brought together with sutures. It was found that silk sutures obtained better results than catgut sutures. Pains were taken to bring the mucous as well as the serous surfaces very accurately in contact. Two of the seven dogs alone survived this operation. One died eight months after the operation; at the autopsy a deep ulceration was found at the point of the cicatrix. The other was killed at the end of five months. The cause of death in the other cases was peritonitis, produced in two cases by opening of the abdominal cavity by rupture of the sutures, in two other cases by escape of the contents of the intestine into the abdominal cavity, in one case by an improperly applied suture, and in the other by a separation of the cicatrix. In the two successful cases no stricture was formed at the point operated upon. The authors collected a large number of cases of cancer of the stomach observed in Vienna from 1817 to 1873. From these statistics it was found that the number in which there were no complications to contra-indicate the operation was an exceedingly small one.

Exsection of the Pancreas.[2] — This operation was performed by Dr. Justin, of Sebastopol, California, assisted by Dr. B. B. Allen, who reports the case. The patient was an Indian, thirty-five years old, who had been stabbed in several places. The pancreas was found protruding from an orifice a little in front and above the left kidney. It had

[1] Gussenbauer and Winiwarter. Langenbeck's Archives of Clinical Surgery, xix. 347, 1876.

[2] Dr. Rutenberg. Wiener medizinische Wochenschrift, Nos. 34 and 35, 1876.

been exposed about twelve hours, and was so altered that it was thought unadvisable to replace it. It remained untouched for two days, when a ligature was put around the base of the protruding mass, and a portion seven inches in length was removed. Nineteen days later, the ligature having come away, and the remains of the organ having retracted into the abdomen, the wound closed. The patient appears to be in no way affected by the loss of the organ. The writer says: "Whilst the pancreas was dangling from the orifice it was still secreting a greasy fluid, and, in handling it, my hands became greasy." It is to be regretted that no more satisfactory proof of the identity of the mass removed with the pancreas was given by the writer.

Operation for Cleft Palate with the Object of Obtaining a Clear Speech without the Nasal Tone.[1] — The author reviews the various operations for cleft palate, and points out the difficulties in each by which the nasal tone is still preserved. The insufficiency of the new palate acting as a valve to separate the nasal from the buccal cavity is the cause of the nasal tone. This insufficiency is caused by the immobility and shortness of the new palate, which prevents it from coming in contact with the posterior wall of the pharynx with sufficient accuracy to exclude the passage of air. Passavant attempted to remedy this difficulty by separating the soft from the hard palate by a cross-cut, which leaves the velum freely movable; its lower edge is then refreshed and stitched to the lower wall of the pharynx. Another device of the same surgeon was to free the velum by two lateral incisions extending forwards from the base of the soft palate close to the alveolar processes, the two being united by a cross incision; the flap so formed was dissected up and set back. A communication between the mouth and nose was thus left through the bony fissure, and must be closed by a future operation. These operations have been tried in but one or two cases, and with partial success only. Dr. Mason, of London, has freed the tense velum by lateral incision from the posterior border forwards, converting the velum into a large uvula. This had the effect of relieving the tension, but the valve was still insufficient, and the nasal tone remained. Schönborn lengthened the palate by a flap taken from the posterior wall of the pharynx, and stitched to the lower border of the velum. After union the base of the flap was cut away. The author proposes an operation based on the action of the superior constrictor muscle of the pharynx, which renders this portion of the pharynx quite prominent when the palate is lifted to meet it. A permanent semi-circular prominence is effected by the cicatrization resulting from an excision of a band of mucous membrane from this portion of the pharynx. The portion removed may extend partially or completely across the pharynx. The posterior wall of the pharynx is thus brought nearer to the palate, while the con-

[1] American Medical Weekly, November 11, 1876.

traction of the transverse cicatrix would counteract the tendency of the longitudinal cicatrix in the newly-formed palate to contract. The contraction of this latter is supposed to shorten a palate which would otherwise be sufficiently long to close the passage. It will be noticed that Schönborn, by taking his flap from the posterior wall of the pharynx, not only lengthens his palate, but produces the desired cicatricial prominence of the pharyngeal wall. The author recommends his method for cases which have already been operated upon by the old methods without improvement of the voice.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

ARTHUR H. NICHOLS, M. D., SECRETARY.

A STATED meeting of the society was held at the Evans House, Boston, Tuesday, July 11th, the president, DR. J. P. MAYNARD, in the chair. Present, forty-six members.

DR. COGGSWELL, of Bradford, president of the Massachusetts Medical Society, present by invitation, was introduced, and made a brief address.

DR. D. B. VAN SLYCK, of Brookline, presented a paper upon the management of the obstetrical forceps. He portrayed the doubts and perplexities of the young practitioner when confronted with his first forceps-case, and argued that this embarrassment was often due to the incongruous, illogical rules laid down in the text-books for his guidance. The usual teaching in this matter was based upon an incorrect theory, and gave rise to a needless multiplicity of complicated and conflicting rules, constantly traversed and disregarded. He would substitute the proposition that the fundamental law of application of obstetrical forceps should take especial cognizance of the curve of the pelvic axis, and not of the particular presentation of the fœtal head; in other words, of the anatomy of the mother rather than that of the child. He designated this as the German teaching, and ascribed to Dr. C. C. P. Clark, of Oswego, New York, the credit of having been the first in this country to publicly profess these views, so widely at variance with the constituted authorities. Dr. Van Slyck proceeded to lay down simple and intelligible rules for applying the instrument, and demonstrated that it is the tendency of the blade to arrange itself in symmetry with the maternal parts, either in accord with the intelligent direction of the accoucheur, or in spite of his efforts to the contrary. He maintained that the sole function of the forceps is to afford means of extraction. To use the instrument as a compressor he thought illogical and dangerous. Traction should be made in the general direction of the course of the uterine and abdominal muscles, modified by the line of the pelvic passages. The application of one third traction and two thirds lateral movement, as is recommended by some authorities, is to be condemned. He considered rigid soft parts, or vigorous expulsive pains, no contra-indication to the employment of forceps, arguing that artificial aid is especially appropriate in such cases. The practitioner, confident of the absolute safety of the proceeding, should

resort to the forceps with the object of abridging the period of suffering, and thus anticipate the stage of exhaustion.

Dr. H. A. Martin expressed concurrence with the views set forth in this paper. He mentioned a case lately seen by him, where injury done by the forceps was indicated by a curvilinear mark extending into the fossa of Douglas. Sloughing had occurred in the deeper part of this tract, terminating in a minute opening into the base of the bladder. Pressure of the head could not have caused fistula at this point. It was evident to him that the lesion was caused by the edge of the forceps-blade used with a see-saw motion, the instrument being, in all probability, imperfectly locked. He had never seen a fistula of this character before that was not caused by impacted head.

Dr. Gifford spoke of the importance of emptying the bladder by the catheter before delivering by forceps.

Dr. R. T. Edes read a paper upon intracranial syphilis, which is to be published in the forthcoming volume of the City Hospital Reports.

In reply to questions, he said that it would be possible to distinguish a syphilitic from a non-syphilitic tumor of the brain by the microscope and gross appearances taken together, if not by the microscopic examination alone. For treatment he favored the administration of bichloride of mercury in small doses, and large doses of iodide of potassium (ten to twenty grains three times daily).

Dr. H. A. Martin related a case illustrating the favorable effect of the bichloride in intracranial syphilis. The patient, who had had primary syphilitic lesion one year previous, suffered intense pain in the temples, increased at night, with loss of memory and of coherence of thought. His gait was staggering, and he appeared almost demented. The bichloride was given in small doses for a period of three months, at the end of which time the constitutional effects of the drug became evident, and a sudden amelioration of the more urgent symptoms was noticed, followed shortly after by an abrupt and complete restoration to health.

Dr. Sabine said with regard to the specific endo-arteritis alluded to, that the same occurs in the lungs in ordinary phthisis.

Dr. J. A. Gordon read a paper on suppurative inflammation of the symphysis pubis, giving the history of a case of the disease. The patient, twenty-four years of age, had symptoms during her third pregnancy indicating relaxation of the symphysis. Aching and sharp pains in the pelvis and thighs began on the fifth day after delivery, and increased in severity during several days following. Slight chills occurred on the ninth day, with increase of temperature. On the fifteenth day after delivery the temperature was 103°; there was prostration, nausea, and vomiting, with coated, dry tongue. The slightest motion induced extreme pain. Decubitus was dorsal only, with feet widely extended. Pressure near the pubic symphysis caused intense suffering. Catheterization was necessary twice daily. On the eighteenth day a severe chill occurred; the temperature reached 105½°, and the pulse 120. Constitutional symptoms abated the following day, and eleven days later (the thirtieth day after confinement) Dr. Gordon, by means of the pneumatic aspirator, evacuated ten ounces of pus from the mons veneris. The fluctuating tumor at this

point, previous to the removal of the pus, was of the size and shape of half a cocoa-nut. There was a free, bright-red discharge from the vagina. A fluctuating tumor pressed the uterus backward and occupied the front of the pelvic cavity, displacing the urethra and extending downward into the left labium. Three days later, about the same quantity of pus was withdrawn from the left labium. Two or three days after this the abscess pointed on the inside of the left thigh. Incision was made with a bistoury, and about half a pint of pus was removed. Complete relief to all the symptoms ensued. The patient walked about in three weeks, but wore a hip-binder for several months. Recovery was complete.

Dr. Gordon proceeded to describe the anatomy of the pelvic articulations, and discussed the symptoms and pathology of relaxation of the ligaments, quoting as authorities Matthews Duncan, Fordyce Barker, and Cazeaux. The treatment of relaxation was stated to consist in keeping the opposed surfaces of the pelvic articulations closely and firmly together by means of a stout bandage applied around the pelvis and bearing on the hips.

In conclusion, he quoted from a paper by Dr. F. G. Snelling[1] a description of suppurative inflammation of the pelvic articulations. It is there stated that caries of the bones may take place, in which case the result is apt to be fatal. Anchylosis seldom ensues.

Dr. H. A. Martin had now under observation his second non-puerperal case of relaxed symphysis pubis, in the person of an old woman. The symptoms were extreme pain, slight separation of the articular surfaces, and partial inability to walk. There was no crepitus. Perfect relief had been afforded by the application of a band five inches wide, to which were attached two straps and buckles, and pads of cotton.

Dr. W. P. Bolles exhibited a wet preparation of a gravid uterus containing a fœtus of about the sixth month. By means of windows cut in the anterior and posterior walls of the womb he showed the child and placenta *in situ*, the uterine decidua, the membranes, and the umbilical cord.

Dr. G. K. Sabine next read a paper on Lister's dressing, exhibiting specimens of the material used, describing the mode of its preparation, and finally the method of its use in antiseptic surgery. The advantages claimed for this dressing are that, by excluding all germs, it prevents putrefactive fermentation in a wound, and consequently pyæmia and septicæmia. It is not alleged that it prevents suppuration, as is imagined by many; it does frequently, however, have this effect, and the clots filling a wound usually become wholly organized. The fever supervening upon surgical operations seems to be much less, while the subsequent pain and discomfort are diminished. Dr. Sabine quoted from numerous eminent authorities to show that the claims advanced in behalf of this dressing are well founded.

Dr. H. A. Martin read a paper on Tracheotomy without Tubes, which was reserved for publication.

He also exhibited a calculus about the size of a walnut, presumably uric acid, correctly diagnosticated by Dr. J. S. Flint and himself as adherent. It was removed with difficulty, but with successful result, by the operation of lithotomy.

[1] American Journal of Obstetrics, February, 1870.

ILLUSTRATIONS OF CLINICAL SURGERY.[1]

THIS, the fourth fasciculus of the Hutchinson plates, is the first of a series of three illustrating the results of injuries to the head. The plates are taken chiefly from a large volume of original drawings which accompanied the author's Astley Cooper prize essay for 1864. They are selected to explain the more frequent causes of death, and are introduced by a tabular list of the fatal cases which were narrated in the essay. It will be seen by reference to this table that the early deaths were caused by concussion, contusion, and compression; the next series includes deaths from arachnitis and encephalitis; and the last group, those in which inflammation of bone was the cause of the other changes which led to death.

The first plate illustrates direct traumatic arachnitis. In this case the inflammation exerting an influence upon the cortical layer of the brain in contact with the inflamed part produced hemiplegia, which might have been thought to be caused by pressure. Inflammation of the sub-arachnoid spaces at the base of the brain, passive congestion and diffuse ecchymosis of the pia mater, and contusion of the surface of the brain are the subjects of the accompanying illustrations. In the subject of the latter sketch death was supposed to have taken place (twenty minutes after the accident) from simple concussion, although at the post mortem lines of fracture in the base of the skull were found and a thin clot of blood in the arachnoid cavity, the latter being considered merely concomitants of the injury. The author, however, observes that many cases of concussion which recover are attended by surface lesions at least as extensive as those seen in this sketch; also that, although we may not meet with cases of death from concussion without lesions, it is his conviction that a considerable number of the head cases, fatal within periods of a few hours or a day or two, die from the general effects of the shock to the cerebral mass.

The illustrations are beautiful specimens of art, and this series promises to be as interesting as those portions of the work which have already appeared.

SMALL-POX IN ENGLAND.

THE value of vaccination is not likely to suffer in public estimation by the silly attacks of conceited ignorance which from time to time are made against it. England is at present suffering from an epidemic of small-pox, which though so slight as hardly to deserve the name is justly commanding much attention. Deaths from the disease in London reached fifty-two in the week ending November 18th, which is more than there have been for over four years. The records of the next week, however, showed only forty-three. We are not aware how serious an anti-vaccination movement there has been, but we gather that some remarks of Mr. Gladstone's, though rather of the oracular, non-committal kind, have tended to strengthen it. The remarks in question were in a letter, read last May at an anti-vaccination meeting in Manchester, and

[1] *Illustrations of Clinical Surgery.* By JONATHAN HUTCHINSON, F. R. C. S. Philadelphia: Lindsay and Blakiston. 1876.

later in a private letter which naturally became public. On the first occasion he wrote as follows: "I regard compulsory and penal provisions, such as those of the Vaccination Act, with mistrust and misgiving, and were I engaged in an inquiry I should require very clear proof of their necessity before giving them my approval; but I am not able to undertake to enter upon an examination of the question." In his last letter he is less guarded: "I view with misgivings all new aggressions upon private liberty, unless upon a clear and certain proof of necessity; and I keep my mind open upon the question whether such proof has or has not been supplied in the matter of vaccination." Mr. Gladstone apparently felt he had gone too far, for he subsequently authorized Dr. Russell Reynolds to say for him "that he no more questions the use of vaccination, which is practiced and repeated in his family, than he questions other well-established medical doctrines and practices," which is ambiguous after all. This is but another instance of the tendency of politicians, statesmen if you will, to look on matters of public health as mere trifles to be taken up or thrown aside according to the pleasure of the many-headed infant they wish to conciliate. Some curious statistics, arising perhaps from this discussion, have been brought out, which though really strongly in support of vaccination may be so presented as to appear to the unwary to have the opposite tendency. The *Lancet* of November 25, 1876, publishes some statistics regarding the mortality of hospital small-pox cases in the eighteenth and nineteenth centuries, which seem to show that the proportion of mortality from small-pox at the present day is as great as it was more than a century ago, before the protective influence of vaccination was known; but the figures show also that at the present day the disease is far more fatal among the unvaccinated than it formerly was.

In 1723 Dr. Jurin recorded 17,151 cases of small-pox, among which the mortality was seventeen per cent. Duvillard records 24,594 cases, occurring in various parts of Europe between 1700 and 1763, among which the mortality was nineteen per cent. In the London Small-Pox Hospital the mortality among 6456 cases treated in 1746–63 was twenty-five per cent. Of 14,808 small-pox cases treated in the Metropolitan Asylum district small-pox hospitals during the epidemic in London in 1871–72, the mortality was nineteen per cent. Seventy-five per cent. of the cases then under treatment were vaccinated cases, but the mortality was only ten per cent. among them, while it was forty-five per cent. among the unvaccinated. It appears, therefore, that the recent proportion of mortality among unvaccinated small-pox is forty-five per cent., whereas in the last century, if the before-mentioned figures are trustworthy, the proportion did not average twenty per cent.

"These figures," says the *Lancet*, "seem to prove that modern small-pox is a more fatal type of the disease than was the small-pox of the eighteenth century. More recent experience tends to confirm this view, for since the beginning of this year 687 completed cases of small-pox have been recorded in two of the London hospitals. The mortality among these has been twenty-four per cent., exceeding by five per cent. the rate of mortality in 1871–72. The proportion of vaccinated among those treated this year has been seventy-five per cent., and the mortality of the vaccinated has been thirteen per cent.,

whereas the mortality of the unvaccinated has been fifty-seven per cent. Thus the protective influence of vaccination continues conspicuous, although the mortality among the unvaccinated shows so remarkable an increase." Moreover, we must not forget that beyond all question many through the influence of vaccination escape the disease altogether who probably would have otherwise suffered from it. During the latter half of the eighteenth century ninety-six deaths out of a thousand in England were due to small-pox, while in the first half of the present century there were but thirty-five in a thousand. It has been suggested that small-pox has lost a part of its virulence, but the mortality among the unprotected shows that this view is not tenable.

MEDICAL NOTES.

— A sure sign of death, according to Dr. H. Almès, in *La France médicale*, April 1, 1876, is failure of the iris to contract after puncture of the cornea and discharge of the aqueous humor. The puncture of the cornea made with a cataract-knife, or an ordinary lancet even, is a totally harmless operation.

— The Baden privy councillor, Dr. Kussmaul, has received a call to occupy the chair of clinical medicine made vacant by Professor Leyden, lately appointed professor in Berlin in Traube's place.

— In answer to a question of a correspondent, the *British Medical Journal*, November 25th, says: "If the re-vaccination have been performed about or after puberty it is not necessary to repeat it; but if it have been done before that age it should be repeated."

— At a meeting of the Paris Academy of Medicine, November 14th, M. Féa, of Padua, showed by comparative tables that maize, or Indian corn, is superior to all other cereals in fatty matters; that it may be considered as a perfect food; and that the objection sometimes raised against it of tending to create disease is untenable.

— It is interesting to compare the statistics of mortality of Boston for a few weeks past with those of the corresponding weeks a year ago.

For the weeks ending October 30, November 6, 13, 20, and 27, 1875, the mortality was 156, 140, 206, 159, and 165 respectively, while for the weeks ending October 28, November 4, 11, 18, and 25, 1876, the mortality was 116, 133, 134, 118, and 121 respectively. The lesser mortality of the present year is especially marked in the smaller number of deaths from zymotic diseases. For the above-mentioned weeks in 1875 they were 46, 53, 58, 51, and 54, while for the present year they have been 28, 32, 30, 22, and 17.

— A down-town church in New York, says the *Sanitarian*, after going through the process of an elegant frescoing, recently invited the attendance of the newspaper reporters. As a consequence, among other elegant things prominently noticed in the *Sun* of the next day were the elaborately executed

tural mottoes on the church walls. One of these, quoted from Jacob's nation at Bethel, reads, "How dreadful is this place! this is none but the house of God." The reporter goes on to remark: Considering ct that there is a total absence of ventilation, and that a great many of

the tenement-house population worship at this church, the Scriptures could hardly furnish a more appropriate motto than "how dreadful is this place." It is a dreadful shame for people to be untidy in their persons, or to go unwashed to the house of the Lord; and it is a dreadful piece of carelessness for a building committee to make a church so much like a packing-box that the foulness thus communicated to the air cannot get out of doors. They seem to be afraid to turn that bad air out of doors, probably for fear it will pollute the neighborhood. So the sexton locks it in by shutting all the doors and windows as soon as the congregation depart.

— Dr. Saulmann, in a meeting of the Hufeland'sche Gesellschaft, related a case of dysmenorrhœa membranacea. The woman, before marriage, had menstruated regularly, and afterwards gave birth to four healthy children. The births were normal. In August, 1875, during menstruation, the patient observed the discharge of large shreds, which on examination were thought to be the sequelæ of an abortion. No embryo was discovered. The shreds came away on the first day of menstruation only. In September another membrane came away, which on gross examination appeared to consist of blood-clot and a few shreds. In October, November, and December the same membrane appeared. The last one was examined by Virchow, Orth, and himself. The uterus was swollen, lengthened, a little anteflected; the general condition was good; the face was pale, and there was a little fluor albus. After October no coitus took place. Upon a detailed examination of the membrane the reporter sums up as follows: —

(1.) That the dysmenorrhœal membrane is *pathological*, and does not depend on *impregnation*, because the ends of the utricular glands are found in it, that is, it consists of the whole uterine mucous membrane.

(2.) It is pathological because it appears after it has been certainly determined that no coitus has taken place.

— The *Wiener medicinische Presse* of October 15, 1876, has the following regarding the danger of kerosene smoke. A merchant returned home about two o'clock at night and found his wife lying on the bed groaning heavily and unconscious. She was waiting his return, and at last, tired out, laid herself on the bed, after turning down the wick of a lighted kerosene lamp as low as possible without extinction. In this position of the wick, if the oil is bad, a vapor mixed with an innumerable quantity of specks of soot diffuses itself through the apartment, and so covers the eyes, nose, and respiratory organs that one runs a danger of suffocation while falling asleep. It is advisable, therefore, to allow the lamp to burn brightly or to extinguish it entirely.

— The *Berliner klinische Wochenschrift* mentions that Traube's library is in the possession of the Berlin publisher, Hirschwald, and that a very fine catalogue of it has appeared. The catalogue contains four thousand and forty-two titles, leaving out of account the extraordinarily rich and almost complete sets of existing journals and archives. It laments the fact that this carefully selected library is not secured for some scientific institution, but is in danger of being scattered.

— In the *Zeitschrift für Geburtskunde*, 1875, i. 2, Martin and Ruge publish the results obtained by the examination of the urine of twenty-four new-born

children. Sixteen were born at the end of a normal pregnancy, and eight were born in the ninth month. Contrary to the accepted belief that the child urinates immediately after birth, they found that one third of the children first urinated twenty-four hours after birth, and only one eighth urinated twice within this time. The amount of the first urine averaged 9.6 ccm. (ʒ 2.59), and thence increased in quantity, especially after the third day. The average for the first ten days was 40 ccm. (ʒ 10.8). The color of the first urine for the first five days was an intense yellow; from the sixth day it became paler; the reaction of the first urine was mostly acid; the specific gravity, which was at first 1012, fell up to the tenth day, when it was 1003. Albumen was frequently found in the urine of the new-born children, which gradually decreased and disappeared on the eighth day. Bile coloring matter could not be found, even in the urine of icteric children. There was always albumen found in the urine of still-born children, which the writers regard as partly a post-mortem appearance, since urine placed in the bladders of dead children showed albumen after eighteen hours; they also consider that obstruction to the circulation (prolapse of the cord, etc.) during the birth may give rise to the albumen. In the urine of those children whose mothers at the same time suffered from nephritis, very abundant albumen and even hyaline casts were found. In fourteen out of twenty-four (living) children, hyaline casts were found, together with different kinds of epithelium, and the authors therefore thought that many cases of convulsions might perhaps depend on uræmia. The kidneys of new-born children, according to these investigations, are in a hyperæmic-catarrhal condition, which may rise to a true inflammatory process, especially if the mother is sick at the same time. Usually the diseased appearances disappear shortly after birth. The therapeutic indications are therefore obvious.

BOSTON CITY HOSPITAL.

SURGICAL CASES OF DR. G. W. GAY.

Lupus of Face; Removal by the Knife. — H. N. B., a blacksmith, sixty-eight years of age, entered the hospital in May, 1875. He had a ragged, indolent ulcer under the left eye, extending from the inner to the outer canthus, and an inch and a half wide. The lower lid was destroyed, but the eye was sound. It seems that he had a small ulcer in this place seven years before, which healed under treatment and remained healed until three months prior to his entrance to the hospital.

This patient stayed in the hospital until October 9th, when he was discharged considerably relieved, but by no means well. He was treated by the actual and the galvano-cautery, nitric acid, the acid nitrate of mercury, and various lotions.

Mr. B. was re-admitted in August, 1876, with the disease very much increased. The left eye was destroyed, and the right cornea was getting a little cloudy. The ulceration extended on to the right side of the nose, down upon the left cheek, round upon the temple, left eyebrow and upper lid, as well as deep into the orbit. He suffered greatly from the constant pain, and begged that something might be done for his relief.

August 25th. The patient was etherized and the whole growth thoroughly excised with the knife. The operation was necessarily rapid on account of the weak condition of the patient, and the hæmorrhage was profuse. It was controlled by pressure as well as possible during the operation, and afterwards by silk ligatures cut short, and by a compress and bandage. The erosions upon the malar bone were cauterized with nitric acid. The orbit was cleaned out, and the nose divested of skin over two thirds of its extent. The patient rallied well from the operation, and with tonic treatment and simple dressing and a little grafting the wound was reduced to a small granulating spot, half an inch in diameter at the time he left the hospital, three months after the operation. At present there are no signs of a return of the disease.

Cleft Palate; Operation; Failure followed by Great Improvement. — B. L., a schoolboy, aged fourteen years, entered the hospital September 1, 1876, with a congenital cleft of the soft palate. It was an inch and a half long by an inch and a quarter wide, and extended to the hard palate. The patient was under treatment last year in this institution for suppurating glands of the neck which have nearly subsided. The boy seemed to be in a fair condition for an operation, and on being assured that it would probably improve his speech and power of swallowing somewhat, and moreover would be attended with very little danger, the mother requested that an effort should be made to close the fissure.

The patient was fully etherized, Smith's gag was adjusted, and the edges of the cleft were pared. Free lateral incisions were then made extending completely through the soft palate and a little way into the hard palate. The flaps were carefully adjusted, and secured by eight or ten silk sutures, there being of course no tension upon any of them.

There was no union by first intention except for about half an inch at the top of the fissure, and all but two of the sutures sloughed out in the course of ten or twelve days. Three weeks after the operation the patient was discharged, the fissure being nearly as large as it was when he came to the hospital. He continued to come to us for some time to show his throat, and when last seen, in November, the side-cuts were entirely closed, leaving no deformity, and the original fissure was reduced to a quarter of its former size. He could talk a little better and could swallow much easier. He was advised to wait another year before having anything more done, as he was gradually improving.

We lately operated on a young man for a perforation of the soft palate, the result of specific ulceration. Although the operation did not succeed, yet the parts were aroused to action and the opening contracted rapidly, so that when last seen, some weeks afterward, it was nearly closed. This is the second case of syphilitic perforation of the palate we have tried to close by an operation. The first case was successful, notwithstanding the fact that the opening was half an inch in diameter and extended through the hard palate.

LETTER FROM NEW YORK.

MESSRS. EDITORS, — On the 25th of July, 1771, the board of governors of the Society of the Hospital in the City of New York, in America, consisting of twenty-six members, held their first meeting, under a charter granted by George the Third. In 1773 the board purchased five acres of ground on which to erect a hospital. The foundation was laid July 27th of the same year. In February, 1775, when it was almost completed, the building accidentally took fire, and was nearly consumed. The war coming on soon after prevented any attention to the institution for some years, and it was not until the 3d of January, 1791, that the building was in a proper condition for the reception of patients, when eighteen were admitted. Since then it has never closed its doors until, by a vote of the board of governors, it was abandoned on the 19th of February, 1870, and the property was leased for business purposes. The hospital was situated on a piece of ground bounded by Broadway, Worth, Duane, and Church streets. It soon became the most extensive school of surgical practice in this country. The names of Wright, Post, Mott, Stevens, Hosack, Kearney Rodgers, and many others who have been connected with the hospital, have given to the institution a world-wide reputation. The location of the hospital was everything that could be desired. Then why was it abandoned? In 1818 the board purchased the property on which the Bloomingdale Insane Asylum now stands, consisting of eighty (80) acres, which institution has continued under the control of the board. The reason assigned for closing the hospital was that it ran behind in expenses about twenty-five thousand dollars a year, and that they could not afford it. About this time property was purchased in Westchester County on which to erect a large asylum to take the place of the one at Bloomingdale. There has been for years two parties in the board of governors, the friends of the hospital and those of the asylum, and it is not too much to say that they sacrificed the hospital to the asylum. At the time of closing the hospital the value of the property held by the board, not including the hospital grounds, was at least *two millions*. In 1874 a plot of ground, one hundred and seventy-five feet wide by two hundred feet deep, extending from Fifteenth Street to Sixteenth Street, and situated between Fifth and Sixth avenues, was purchased for three hundred and fifteen thousand dollars, and on the Fifteenth Street side of the property they have been erecting what may be called the new New York Hospital. The building is almost completed, and will be opened early next year.

On the Sixteenth Street side, and standing some distance from the street, is a building formerly used as a dwelling; it is ninety-five deep by fifty feet wide, and a description of it was given in a former letter. This now contains the library and pathological cabinet, and is to be used as the executive building of the hospital, thus leaving a plot of ground one hundred and seventy-five feet by ninety on which the hospital has been placed. The materials used in the construction of the building are Philadelphia pressed brick with Nova Scotia stone trimmings, ornamented with tiles. No wood is used; all the beams, rafters, door and window frames, are of iron, and the floors are constructed of iron

beams, filled in with brick, covered with tiling laid in cement, thus making a perfectly fire-proof structure, and leaving no spaces for rats or other vermin. The building is four stories high, with basement, cellar, and a mansard roof, containing one story over the wards, and three over the main building. Perhaps the structure cannot be better described than by stating that it consists of a main building, fifty feet wide by seventy-two deep, and seven stories high, with a series of wards extending out on either side, making a total frontage on Fifteenth Street of one hundred and seventy-five feet, the wards extending into the main building. At right angles to the wards, and on their further end, there are extensions running back, in which are placed the water-closets, etc. The front of the building has a southern exposure. Considerable difficulty was experienced in laying the foundation on the western end, on account of the damp condition of the soil, and it was not until the ground had been thoroughly piled that the walls could be laid, and even then the workmen were compelled to work in several feet of water until the foundation had been raised some distance, notwithstanding the constant use of pumps.

The cellar floor is grouted eight inches deep, and over this is cemented. This floor contains a portion of the engine, boilers, and coal bunks, besides the heating, water, and waste pipes. The basement is a few feet below the level of the sidewalk, and is well lighted from an area extending the whole length of the building. It is unequally divided by a drive-way eight feet wide, leading from the street to the back of the hospital. On the left of this drive-way are two rooms for the use of the coroner, and beyond this is the dead-house, situated in the extension. On the opposite side, and fronting on Fifteenth Street, are the rooms for the porter and the apothecaries' department. Beyond this, and occupying the whole width of the building, is a room seventy-seven by twenty-nine feet, having six small rooms partitioned off on the side furthest from the street. Each room contains wash basins, etc. This is to be used as a dispensary department, and the rooms are for examining rooms. In the main building at the back are two wards, male and female, for the reception of night cases; each room is fifteen by fourteen, provided with bath-tub, hot and cold water, and is well lighted. There are also four rooms, each ten by eight, for the reception of violent cases of delirium tremens. Each room is lighted by a small window near the ceiling; they seem rather small, dark, and badly ventilated. The first floor is used chiefly for administrative purposes, and is divided by the main entrance to the hospital into two equal portions, fourteen feet wide, and extending back twenty-four feet to the elevators, leaving a passage-way on one side to the stairs at the back. Extending on the right and left from this main hall are two passage-ways with rooms on either side. On the left as you enter, and on the front of the building, are first two rooms communicating, one eighteen by thirteen, the other fourteen by thirteen; these are to be used for the office of the hospital. Beyond is the room for the medical house-staff, with a sleeping room for the house-physician opening into it. There are five other rooms, varying in size from nineteen by thirteen to thirteen by thirteen, to be used for private patients. There are also water-closets.

On the opposite side of the vestibule and opening into the corresponding hall are rooms for the surgical house-staff, with connecting bedrooms. Oppo-

site are the bath-rooms and water-closets for the staff, also a room for the reception and examination of patients applying for admission. At the end of this passage-way is a ward thirty-one by thirty, which is to be used for children; it will contain eight beds. It is lighted by two large windows on the front and four in the rear. The nurses' room opens into this ward, and also into the passage-way.

In the main building at the back are two rooms, one on either side of the main hall, one twenty by fifteen, the other sixteen by fifteen, which are to be used as the dining-rooms for the staff and nurses. The porter's room is also on this floor, and is connected by electric annunciators with all rooms and wards on the east side, while those on the west side are in communication with the office. At the end of the vestibule and in the middle of the main building are the elevators; one in front is large enough to receive a bed; the other just back of this is for passengers and luggage; and both of these are worked by steam, and run from the cellar to the second story in the mansard roof.

The second, third, and fourth floors are alike in their arrangement, and are divided into wards and the necessary rooms. There are two wards, one on either side of the hall, each 77.2 by 29.6 feet, and fifteen feet high. There are ten windows in front, eight in the rear, and two on the further end. Each window is about nine feet high by three feet wide, and is divided into two unequal portions, the upper being square and containing stained glass, and the lower portion consisting of two sashes thirty by forty inches each, and containing a pane of French plate glass. Those on the rear or north side have double windows. The walls are hard finished, with all corners rounded. The wards are well lighted, but one would think that stained glass windows would be anything but agreeable to the sick. On the left as you enter the ward, and on the north side, are two doors, the one leading into a passage-way going to the ward dining-room, sixteen by sixteen, and connected with the kitchen by a steam elevator; between this room and the ward is the nurses' room, twelve by nine, opening into this passage-way and into the ward. It is fitted with a marble wash-stand with hot and cold water; over this is an electric annunciator and a gong connected with each bed in the ward. At the extreme end of the ward and on the north side is another passage-way, nine by eight, leading to the extension, twenty-nine by sixteen, which contains a room for hot air, steam, or sitz bath; next the ward bath-room, then the wash-room, and at the extreme end the water-closets are placed.

By this arrangement the bath-room and water-closet are placed in a separate building, away from the wards, so that it does not seem possible that there can be any trouble arising from that source. There is a balcony running the whole length of the building on the second, third, and fourth stories, communicating with each ward by a door. One cannot help thinking that the architect has sacrificed safety to effect; the railing is so low that there will be great danger of patients falling over. The capacity of the wards is about twenty-one beds each, the beds being placed between the windows.

(*To be concluded.*)

A LETTER FROM THE LATE DR. RUSH.

MESSRS. EDITORS, — The following letter of Dr. Rush may possibly find a place among your centennial items. It contains, besides a list of books recommended by him for students of that day, a few practical hints not unworthy the attention of medical scholars of our own time. The letter is addressed to the late Dr. B. Lynde Oliver, of Salem, for many years his constant correspondent. F. E. O.

PHILADELPHIA, *May* 9, 1808.

DEAR SIR, — I have generally recommended the following books as a nest egg for a medical library, to the young gentlemen who leave our university, with a strong injunction to add to them in proportion as the resources of their profession shall enable them.

Anatomy: Cheselden's, or the New System of Anatomy.

Surgery: Bell's Surgery, Desault's do.

Materia Medica: Cullen's Materia Medica, Murray's do.

Chemistry: Woodhouse's edition of Chaptall's Chemistry.

Botany: Barton's Introduction to the Study of Botany.

Physiology: Haller's First Lines, or Blumenbach.

Practice of Physic: Sydenham, Huxham, Cleghorn, Hillary, Darwin, Cullen, Jackson, Alibert (since translated by Dr. Caldwell), Clark, Mosely, Blane, Vanswieten's Commentaries on Boerhaave's Aphorisms, Duncan's Medical Commentaries, Medical Repository of New York, Cox's Philadelphia Medical Museum — the two latter to be subscribed for and taken constantly.

I have taken pains to inculcate upon our graduates to keep a record of the weather, fruits of the year, and Epidemics, in one book, and a record of chronic diseases in another. It is inconceivable how much a physician may learn from *himself* by thus committing to paper facts, events, and even thoughts, connected with his profession. A thousand things escape from our memories in the hurry of business, and from the lapse of time, which would, if preserved, be extremely useful to ourselves and others. I believe we seldom remember *correctly* the results of our practice for more than two years, or, if we do, it is only a solitary case or two, which, from being rare, seldom afford us any advantage in subsequent life.

I thank you for your kind notice of my poor labors in medicine. They would be less exceptionable had they appeared with the facts and reasonings which are contained in my lectures.

From, D^{r} Sir, your friend and brother in the profession of medicine, BENJ^{N} RUSH.

DR. B. LYNDE OLIVER.

P. S. I have never seen nor read of a case of mania from the intemperate use of tobacco. Mania from strong drink is a very common disease in Philadelphia. It bears a much less force of depletion than mania from any other causes. The excitement of the system in it is so transient that I have compared it to a soap bubble. I have never used the digitalis in any of the forms of mania, and seldom with any advantage in any disease except in dropsies, and even in them I have found other remedies more safe and more effectual.

MESSRS. EDITORS, — Is it according to the ethical code of our state society for physicians to advertise themselves in the daily newspapers? It certainly is undignified and not in good taste, and probably disgusts those of our patients who are cultivated, though the common herd may be attracted thereby. A certain physician lately settled in B., a town near Boston, advertises regularly in the local paper of his town, and also advertised last week in the *Boston Herald.* If this communication meets his eye I hope he will have the wisdom to discontinue the custom, unless it is approved by our profession. ***

December 13, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DECEMBER 9, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	483	23.67	
Philadelphia	825,594	324	20.41	22.24
Brooklyn .	506,233	199	20.44	24.92
Chicago . .	420,000	163	20.17	19.75
Boston . .	352,758	144	21.23	26.20
Providence	101,500	38	19.46	19.02
Worcester .	51,087	11	11.19	20.91
Lowell . .	51,639	14	14.09	20.55
Cambridge	49,670	20	20.94	23.31
Fall River	50,372	13	13.42	23.99
Lawrence .	36,240	12	17.02	25.96
Lynn . .	33,548	5	7.75	19.23
Springfield	32,000	7	11.37	20.93
Salem . .	26,344	18	35.53	22.92

Normal Death-Rate, 17 per 1000.

MESSRS. EDITORS,—I received to-day the card I send you.[1] The whole theory seems strange to me. Is it possible that such a disease as chorea can be left entirely to the "vis medicatrix naturæ" without any medication at all? Have we come to this, that the most dreaded diseases can be left alone, by the thinking physician, to take care of themselves? If this is so, physicians may as well relinquish their profession and leave the whole thing to nurses. Chorea is a disease very difficult to cure. I speak from an experience of thirty years. I have had cases come under my care that had existed for from one to three years without relief, though they had been treated by many skillful physicians.

These cases needed the right kind of treatment. *Nursing* alone never would give relief. I remember once being called to a child fourteen years old. She had been afflicted for three years. Eight or ten physicians had tried their skill in vain. I made a single prescription. This was it:—

℞ Fowler's arsenical solution, four drops every six hours.

℞ Griffith's mixture of myrrh and iron, a dessert-spoonful every six hours.

and a laxative once a week. In a month the child was restored to perfect health, and has never had a return of the disease since.

This talk about such cases recovering without medicine is perfect nonsense. Fashion is one thing, common sense another. These dogmatical statements, coming from London or any other part of the globe, can never dethrone medical common sense or the experience of the thousands of physicians that have lived since the days of Galen and Hippocrates.

COMMON SENSE.

LEVERETT, *December* 15, 1876.

BOOKS AND PAMPHLETS RECEIVED. — A Series of American Clinical Lectures. Vol. II. No. 11. On the Treatment of Eczema. By R. W. Taylor, M. D., Physician to Charity Hospital, New York. New York: G. P. Putnam's Sons. 1876.

Naval Medical Schools of France and England. Reported to the Bureau of Medicine and Surgery. By Richard C. Dean, Medical Inspector of United States Navy. Washington. 1876.

[1] This is a reprint (not coming from the editors) of the remarks on cases of chorea treated without medicine, which appeared November 14th, page 713. — EDS.

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THE CURVED LINE OF PLEURITIC EFFUSION.

BY CALVIN ELLIS, M.D.,

Jackson Professor of Clinical Medicine in Harvard University.

"J'espère à ce sujet vous faire voir l'utilité pratique d'un signe découvert par Damoiseau et qu'on n'a pas suffisamment utilisé, au triple point de vue du diagnostic du pronostic et du traitement."

THESE words introducing a lecture upon a case of pleuritic effusion,[1] in which the curved line was shown, are still so applicable as to warrant an additional article upon the subject.

At a meeting of the Boston Society for Medical Improvement in March, 1873, and in the JOURNAL of January 1, 1874, attention was called to the *curvature of the line which limits the flatness superiorly, in cases of effusion into the pleural cavity.*

A general statement only was made at the time, and the cases upon which the remarks were based are now presented, as they make this important point clearer.

CASE I. A colored laborer, twenty-eight years old, entered the Massachusetts General Hospital on November 11, 1872. Two months before, he had a febrile attack which confined him to the house for a month. Though able then to go about, he was not well, did not gain strength, and had some pain in the right side of the chest. The exact duration of the latter could not be ascertained, but it was not sufficiently marked to prevent a diagnosis of slow fever.

At the time of entrance he complained of a sharp darting pain in the right side of the chest, intermitting and interfering with respiration. There was no cough. Though weak he was able to sit up. Repeated examinations showed nothing but an *ill-defined dullness, occupying about the lower inch and a half of the right side of the chest, particularly beneath the axilla.*

On November 27th, sixteen days after entrance, the pain disappeared in the side and attacked the shoulder. An examination at the time showed *flatness as high as the nipple*, and extending around the chest, varying with a change of position. Bronchial respiration and œgophony were heard at the upper part of the effusion.

[1] Peter, Gazette des Hôpitaux, No. 4, 1869.

From this time until his discharge, on January 14th, he gradually improved, and the line of dullness sank to a point an inch below the nipple. *This case is reported as the one which first attracted attention to the peculiar form of the dullness in pleurisy.* When the effusion became so marked as to be unquestionable, the fact that the dullness had been most obvious in the sub-axillary region, during the period of doubt, suggested the possibility, that the evidence of an accumulation of fluid within the pleural cavity might first be obtained in that region, and would be most distinct there even when obvious elsewhere, the superior line of dullness forming a curve. Bearing this in mind, diagrams were made of cases seen subsequently, which show very clearly the correctness of the view advanced.

Case II. On November 10, 1873, an Irish currier nineteen years old entered the Massachusetts General Hospital. Six weeks previous, after exposure to cold, he was attacked with a chill and pain in the

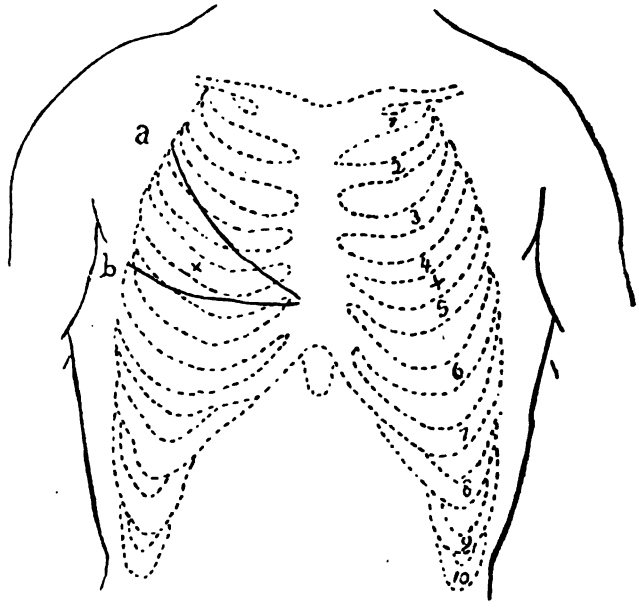


Fig. 1. — *a.* Line of November 25th. *b.* Line of December 28th.

lower part and right side of the chest. He was in bed for two weeks, and was told that he had pleurisy. He then improved, and was up and about for two weeks. There was no cough until two days before entrance, and no expectoration.

On November 12th, two days after entrance, the pulse was 112 and of good character, and the respiration about 20, not labored. On examination of the chest there were found flatness over the whole right

side, moist râles along the spine, with bronchophony and œgophony over the lower half of the back, except along the spine. The moist râles along the spine showed that air was entering the compressed lung in that region.

On November 23d the pulse had fallen to 68. Though the flatness persisted, the respiratory murmur was heard far beyond the line of demarkation both in front and behind, gradually diminishing toward the axillary region, where it disappeared; and there was still increased resonance of voice, in comparison with the other side, but no œgophony. Though the line of dullness had not changed here, it was evident that much fluid had been absorbed, as the respiration was heard so distinctly in the upper part of the lung. On November 25th the absorption became also manifest through a change in *the line of dullness, which though not sharply limited followed the curve shown in the diagrams.* (Figures 1 and 2.)

Normal respiration was heard above and within the line. The bronchial respiration had disappeared.

On December 11th there was a slight, doubtful friction sound beneath the right scapula.

On December 28th *the curved line of dullness had changed as in the diagram.* (Figures 1 and 2, *b*.)

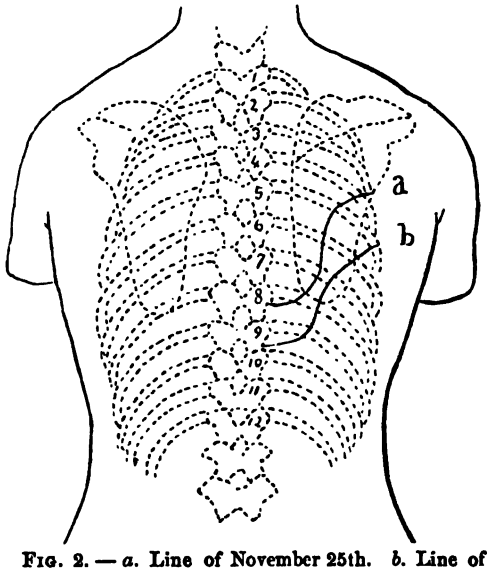


FIG. 2. — *a*. Line of November 25th. *b*. Line of December 28th.

CASE III. On October 3, 1873, a sailor, twenty years old, a native of the Western Islands, entered the Massachusetts General Hospital. As he did not understand English, no special history could be obtained, though it was ascertained that there was pain in the region of the right nipple, and the sputa were yellowish white, and frothy. The pulse was 130, small and weak. Temperature 103°. The whole right side of the chest was flat, except the top of the shoulder and the clavicular region. The heart was pushed to the left. (See Figures 3 and 4, *c*.) Normal respiration was heard above and slightly below the line of dullness, and soft bronchial respiration over the back, quite extensively.

On the following day he was tapped between the eighth and ninth ribs, near the lower angle of the scapula, and eighty-four ounces of clear, yellow serum were drawn off. During the latter part of the operation there

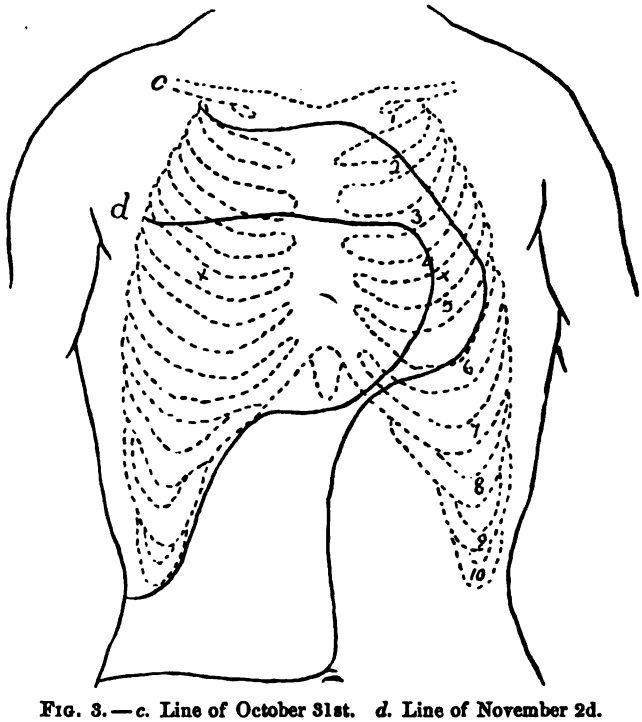


FIG. 3.—*c.* Line of October 31st. *d.* Line of November 2d.

was much cough, which soon ceased. *On November 2d the line of dullness was as shown in the diagram.* (Figures 3 and 4, *d.*) Above the line respiration was heard everywhere, accompanied by moist râles on inspiration, and sibilant and sonorous râles on inspiration and expiration.

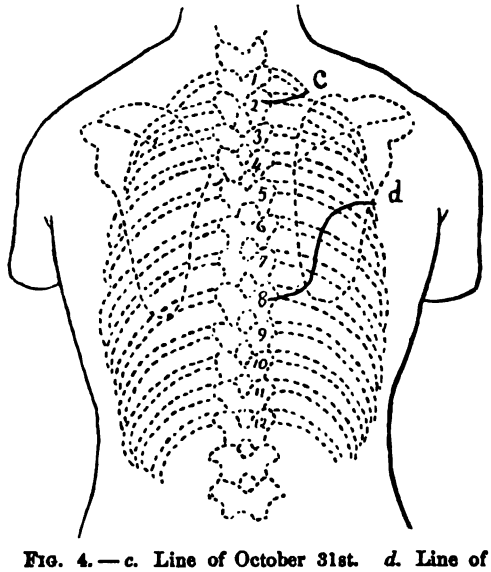


FIG. 4.—*c.* Line of October 31st. *d.* Line of November 2d.

On November 3d the dullness was the same, but the sibilant and sonorous râles had disappeared, and the mucous râles were less abundant. Normal respiration was heard to the base along the spine, and from one to two inches outwards, the area over which it was heard increasing towards the upper part, and following the line somewhat as indicated.

The patient was discharged on December 15th, having been up and dressed for about two weeks.

Case IV. The following case, though one of hydrothorax, illustrates the same point, and is therefore introduced here.

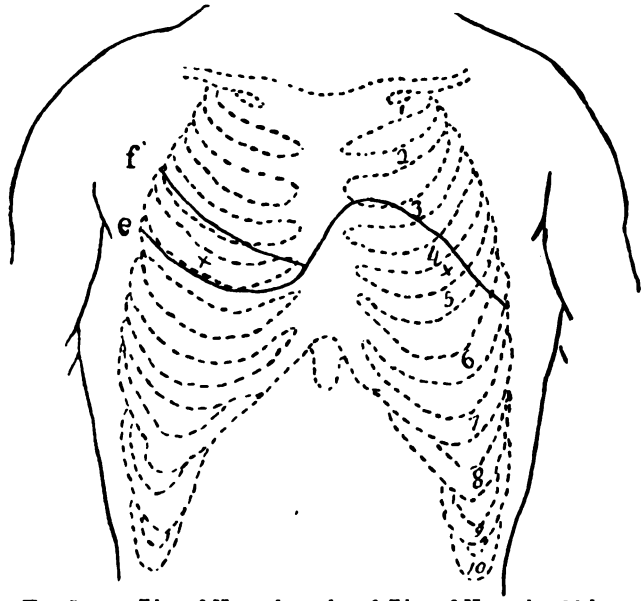


Fig. 5. — *e.* Line of November 8th. *f.* Line of November 16th.

On November 4, 1874, a boy entered the hospital suffering from valvular disease of the heart. Four days afterwards an examination of the chest showed *flatness of the right side below the line e indicated in the diagrams* (Figures 5 and 6), the curve being best marked posteriorly.

On November 16th the flatness had risen to the line *f*. Vesicular respiration was absent over a large portion of the flat region, but that of a bronchial character was heard over the lower third, commencing at the spine and gradually diminishing towards the post-axillary line, where it disappeared. There was also well-marked œgophony over this region.

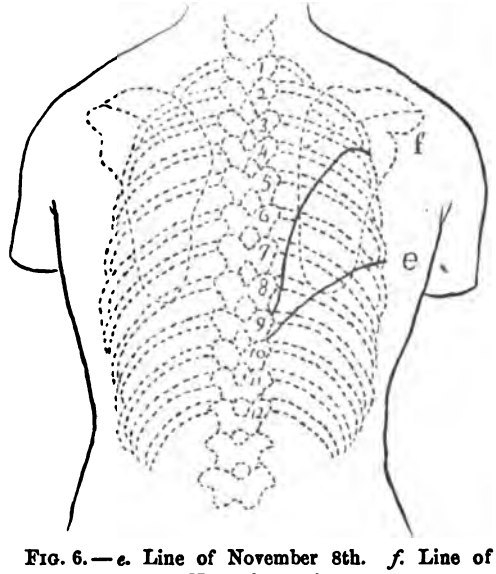


Fig. 6. — *e.* Line of November 8th. *f.* Line of November 16th.

On November 24th the line of flatness had again fallen below the line e. Respiration was heard even lower than the line, but œgophony persisted.

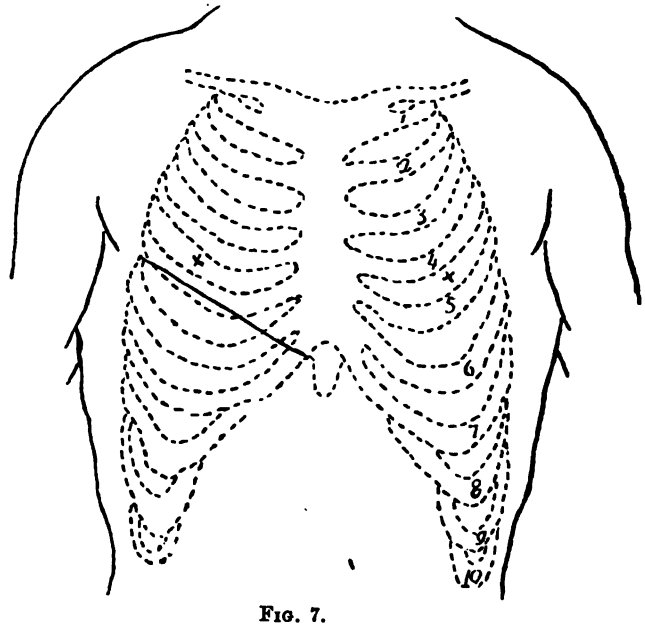


FIG. 7.

The case is also interesting as illustrating the great rapidity with which fluid may increase and diminish. In judging of the efficacy of remedies this important point seems to be too frequently lost sight of.

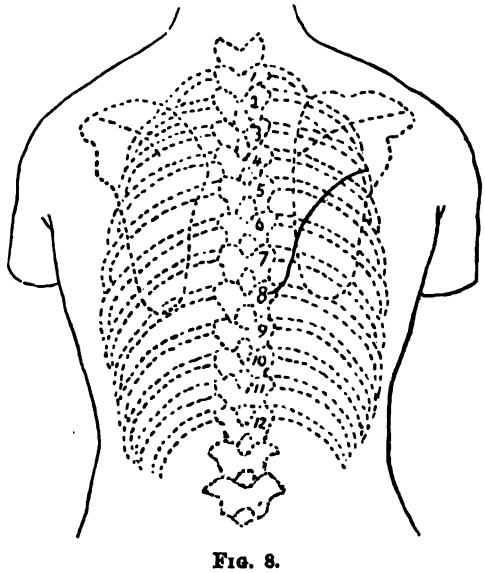


FIG. 8.

CASE V. A young man, sixteen years old, entered the service of Dr. Minot March 28, 1874, reporting that six weeks before he took cold, had a chill, began to cough, perspired at night, and was troubled by pain in the right side of the chest posteriorly, especially on taking a long breath. He had expectorated considerable "phlegm." There had been marked dyspnœa, and he had lost much flesh and strength. He was confined to his room for four weeks, and to his bed afterwards. Three weeks before entrance he was tapped, and a pint and a half of pus were drawn off. On examination after

entrance *the right side was flat below the line indicated.* (Figures 7 and 8.)

As the diagnosis was proved by the withdrawal of pus through a fine trocar, it is unnecessary to give the other physical signs or speak farther of the case, as it is introduced here merely to show the curved line as drawn by an independent observer.

As the observations of Damoiseau alluded to in the previous paper, and published in the *Archives générales de Médecine*, 1843, were based upon cases in which the effusion was subsiding, and as some of the curves differ from those given, it may be interesting to reproduce his illustrations, with a brief statement of some of the valuable conclusions at which he arrived.

In five patients who were recovering from effusion he found the curves as represented in the plates. (See Figures 9 and 10, plates of Damoiseau.)

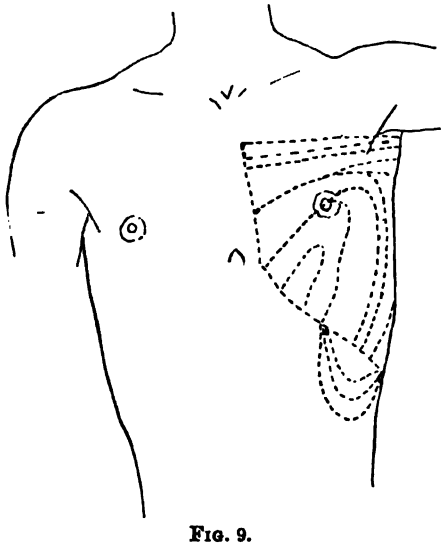


FIG. 9.

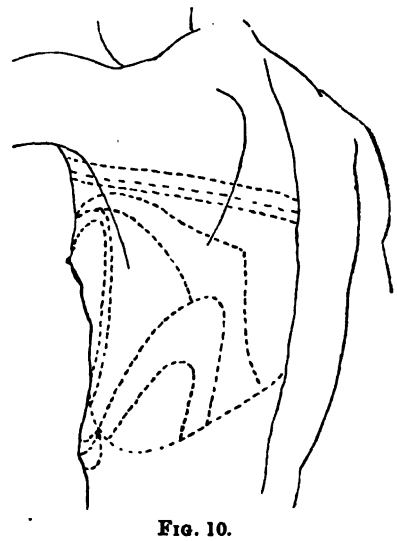


FIG. 10.

Three facts were constant: —

(1.) While the flatness persisted in the sub-axillary region on a level with and beneath the lower angle of the scapula, there was resonance in the lower part of the vertebral groove.

(2.) The flatness always disappeared last from the lowest sub-axillary region.

(3.) Whenever the absolute flatness reached a point about two and three fourths inches above the nipple, the line was nearly horizontal, but beneath this level it assumed a parabolic form, the curvature constantly increasing until it became elliptical in the lower and lateral parts of the hypochondrium.

The cases of Damoiseau, as well as those observed here, show the importance of bearing in mind the fact that *a limited effusion may be detected quite early if sought for in the lowest sub-axillary region.* Damoiseau thinks that even an ounce can be discovered, and that there can be no doubt about ascertaining the presence of two or three ounces.

But little has been written upon this subject, and this little is hidden from the majority of readers in foreign languages and in periodicals. On this account a brief statement is made of the views of such observers as have investigated it.

Wintrich[1] states that the line which marks the upper limit of the effusion forms a parabolic curve quite frequently, though he adds that it is always highest behind.

Dr. Paul Niemeyer[2] speaks of the parabolic curve of Damoiseau as what he has often found.

In a monograph by Adolph Ferber,[3] the author gives the credit to Damoiseau of first calling attention to the curve in pleurisy, but adds "that such a form of limitation, which is exceptional, depends upon the fact that a patient has lain upon the affected side early and continuously."

Aran, on the contrary, considers the curve as *diagnostic of a pleuritic effusion*, while Peter[4] goes still farther and regards it as *indicative of a fibrinous effusion*, and therefore of great importance with reference to diagnosis, prognosis, and treatment.

That the conclusions of the last writer are too absolute is shown by some of the cases observed here. In one (Case III.) the fluid drawn off was clear and serous. If it should be said that a fibrinous residuum might still have been instrumental in giving the peculiar form to the line of dullness, we might cite Case IV., which was apparently one of hydrothorax connected with disease of the heart. Both the conditions of the patients, some of them being up and about, and the quality of the contained fluid make it probable that the curve is dependent neither upon the character of the effusion nor upon the position assumed.

Experiments have been performed to explain the curvature of these lines. Damoiseau himself inflated the lungs of a dead body, and then removed the soft parts until the surface of the lung was seen in contact with the ribs. On drawing out the air with the proper apparatus, the parietal and visceral layers of the pleura were seen to separate first in the lowest part of the sub-axillary region, and then before and behind, until the line of the lower edge of the lung became nearly horizontal.

[1] Virchow's Handbuch der speciellen Pathologie und Therapie, vol. 5, p. 254.

[2] Handbuch der theoretischen und clinischen Percussion and Auscultation. Erlangen, 1868. Page 181.

[3] Die physicalischen Symptome der Pleuritis Exsudativa. Marburg. 1875. Page 33.

[4] Valeur diagnostique, pronostique et thérapeutique des Courbes de Damoiseau. Gazette des Hôpitaux, No. 4, 1869.

In the JOURNAL for September 17, 1874, Dr. G. M. Garland describes the results of injecting a solution of plaster of Paris into the thoracic cavities of living and dead dogs. He found "that the resisting lung rather than the encroaching fluid was the chief moulding agent and factor in determining the curve of dullness." He also found "with small and medium effusions in dogs that the curve and lung were lowest behind. Then the curve rose till it reached the side, whence it proceeded nearly horizontally to the sternum."

To these results Ferber objects. While further observation and experimentation may be necessary to settle this difficult point, and to explain satisfactorily *how* the curve is formed, there can be no doubt about the fact and its value. *The cases upon which the present article is based were observed, and the lines were drawn without the knowledge that similar observations had been made previously.* In some instances the points of flatness were marked by an assistant, while the chest of the patient was covered with a towel, which made it impossible to see the relations of successive portions of the line until it was completed. *They furnish, therefore, additional proof that the sign is sufficiently clear, and one which merits much greater attention than it has hitherto received.*

UNCOMPLICATED BACKWARD DISLOCATION OF THE HEAD OF THE RADIUS.

BY HENRY A. MARTIN, M. D.,

Brevet Lieutenant-Colonel and late Staff Surgeon U. S. V.

THERE came into my office, on the 17th of June, 1876, a man of about thirty, corpulent, and evidently having paid large homage to the royalty of Gambrinus. He had received an injury of the left elbow in the following manner. He and a comrade, in that ebullition of the natural spirits which is born of beer, were having a sort of wrestling bout; my patient had his left arm round the waist of his friend; the right arm of the latter was clasped round the other's thorax; each, in this wise, facing the other, endeavored to throw his opponent; presently they fell, my patient uppermost, his arm under the back of his boon companion when it came in contact with the floor. I made the men take the positions in which they were before they fell, and, as well as I could make out, it seemed probable that the part of my patient which first struck the floor was the inner condyle of the left arm, a little behind its inner extremity, the fore-arm being at the same time forced by the descending weight of the two men into extreme supination. That there had been a violent blow on the inner condyle was evident from marked ecchymosis at that point. My attention was first attracted to this ecchymosis as probably indicating the seat of injury to the bone: but there was none.

The internal condyle, which seemed very prominent, was not fractured. On further examination it was found that the head of the radius lay behind the external condyle. Extending and supinating the fore-arm were quite painful, and the man instinctively supported the arm in a flexed position to avoid this. The character of the dislocation was very evident, and was made still more so on slight extension, and inclination of the fore-arm towards supination. Notwithstanding the fatness of the patient, the button-like head of the radius, and even the depression on its surface, could be perfectly defined. The arm was flexed to nearly a right angle, extension and counter-extension were moderately applied, and, by pressure with my right thumb on the head of the radius, it was easily replaced, but would tend to slip out on the slightest motion of the fore-arm towards supination; once, while I was preparing splints, it *did* slip out while the arm was flexed, but was replaced with very little effort. Pieces of prepared felt [1] of proper shape were dipped in hot water, and applied to each side of the elbow so as to retain the joint at about ten degrees less than a right angle; over this a bandage was snugly wound. The arm was examined in thirty-eight hours; very slight and careful rotation of the fore-arm failed to develop any tendency to displacement; pain and swelling were very much diminished; again in three days there was no stiffness or abnormal limit to motion of the radial joint, and but trifling pain. In three days more there was perfect motion of the elbow, except that extension was somewhat limited. Splints and bandage were not re-applied, but the patient was strictly admonished not to use the arm except for prescribed motion, to carry it in a sling for ten days, after which time for one month to avoid hard use of the arm, and, above all things, for all future time to shun Græco-Roman exercises in connection with Teutonic beverages. I saw him six weeks after this; he had returned to work, and was not aware of any abnormal condition of the arm whatever, but there was still an incapacity to extend the arm to the same degree to which the other arm could be extended.

In view of the extreme rarity of backward dislocation of the head of the radius when uncomplicated with other injury, particularly fracture of the inner condyle, I was slow to conclude that this was such a case, and made the most careful survey and examination, which were repeated at the second visit. Without any doubt whatever, the case was one of this rare form of luxation, complicated with no other displacement or injury of joint or bone. The great infrequency

[1] I have long known "prepared hatter's felt" by its being mentioned in works and cases of surgery, but have never been able to find it at any of our instrument or splint makers. Within a few months I have found a sort of felt, *not* "hatter's," but much thicker than that, which, saturated with an alcoholic solution of shellac, forms a *material* for certain splints, used as above indicated, that leaves nothing to be desired. I have given Messrs. Leach & Greene a sample, and informed them where and how to get the felt and have it prepared.

of the dislocation is reason enough for recording this instance of it. Sir Astley Cooper, with his immense experience, never saw a case in the living subject, but describes and figures an unreduced dislocation in a dissecting-room *cadaver*,[1] which may possibly not have been primarily an uncomplicated case. Druitt alludes to its great rarity. Hamilton counts up twenty-eight cases from all surgical literature; four of them were from his own observation, and three were reported by Dr. Markoe, of New York. Dr. Hamilton says, however, that two of his own cases were accompanied with fracture, and that he was not certain but that they all were, and Dr. Markoe "found in each" of his cases a fracture of the internal condyle of the humerus, and after an examination of a number of the reported cases, he does not find any evidence that this dislocation ever occurs as a simple uncomplicated accident. Commenting upon this Hamilton says: "While I am prepared to admit the possibility of the luxation without a fracture either of the lower end of the humerus or of the ulna, I have found no written account of any case, nor have I seen an example which was absolutely conclusive."[2] Fully aware of all this weight of authority, I examined my case repeatedly with the most exact and thorough care. The skin was very loose over the condyle, the form of the latter could be most fully and exactly made out, and its entire freedom from lesion could be ascertained. The abnormal bagginess of skin over the internal condyle disappeared when the displaced bone was reduced. The induration and ecchymotic discoloration over the internal condyle, observed eight days after the accident, and even later, evinced clearly enough how violent had been the contusion at that point. That the condyle escaped fracture was remarkable, but that it *did* escape admits of no doubt. Why this bony process is so generally fractured in those cases in which the head of the radius is luxated backwards, is not clearly demonstrated by any of the numerous writers I have looked into. Hamilton says, under the head of "Causes," "a direct blow upon the front and upper part of the radius; a fall upon the elbow, or upon the hand; a violent effort to supine the fore-arm while it is grasped and held firmly in a state of pronation; probably, also, sometimes it is occasioned by a twisting of the arm in machinery."[3] One or two of these causes might account for fracture of the inner condyle, and the rest for dislocation of the radius, but none of them for dislocation of the radius backwards, *with* fracture of, or contusion over the internal condyle. Is it not probable that, in all cases in which these two lesions are found, the patient receives a violent blow upon the inner aspect of the condyle while the fore-arm is in extreme supination, as was almost certainly the case with my beery client, though he, having a humerus harder than his head, escaped the fracture?

[1] Sir Astley Cooper. A Treatise on Dislocations and Fractures of the Joints. London. 1842. Page 459 et seq.

[2] Hamilton. Fractures and Dislocations, etc. Philadelphia. 1860. Page 576.

[3] Hamilton. Op. cit., page 576.

RECENT PROGRESS IN DERMATOLOGY.[1]

BY JAMES C. WHITE, M. D.

THE first two of the contributions mentioned below,[2] by Professor Kaposi, of Vienna, have appeared as separate articles during the past summer; they form a part, however, of the concluding portion of the general publication announced under the third title. This extensive work, the first part of which appeared in 1860, and in the Sydenham translation in 1866, is at last finished, and forms the most valuable treatise on skin diseases ever published. The earlier parts were mainly the work of Professor Hebra, and contain the results of his immense experience and acute observation; the latter portions are mostly, and this last volume wholly, prepared by Professor Kaposi, his assistant. The latter part is an exhaustive treatise upon the last three of Hebra's twelve classes of diseases, the Ulcera cutanea, Neuroses, and Dermatoses parasitariæ. Since the publication of the earliest part, a period of sixteen years, there have been important additions to our methods of study in dermatology, and a clearer insight into the nature of the anatomical and pathological conditions that underlie those surface appearances which formerly sufficed for all purposes of diagnosis and classification; and no one is better fitted than Professor Kaposi to apply these methods to the investigation of the obscure affections which largely make up the concluding volume. The first half has also been revised and republished by Hebra within two or three years, so that the complete work represents to-day not only the latest and deepest studies in the science, but in fullest detail the practice also, of dermatology.

Cutaneous ulcers are divided, by Kaposi, into those resulting from circumscribed or diffused inflammation, and those which are the result of new growths, as lupus, leprosy, carcinoma, and syphilis.

Under neuroses, he defines such pathological conditions of the skin as are the result of its abnormal or disturbed innervation, without the occurrence of any pathological change that can be demonstrated by the present methods of examination in the cutaneous nerves. This is a narrow definition, quite out of keeping with the modern fashion of making nearly every disease of the skin a neurosis, but very character-

[1] Concluded from page 674.

[2] Cutaneous Ulcers (Ueber Hautgeschwüre). Kaposi. Wiener Klinik. II Jahrgang, 5 and 6 Heft. May, 1876.

The Present State of our Knowledge respecting the Vegetable Parasites of the Skin. Kaposi. Stricker's Jahrbücher. Heft iv. 1876.

Lehrbuch der Hautkrankheiten. Von Dr. Ferdinand Hebra und Dr. Moriz Kaposi. Zweiter Band. Dritte Lieferung. Virchow's Handbuch der speciellen Pathol. und Ther. III Band. II Abt.

istic of that sensible feature of the Vienna school, the refusal to recognize the imagination as the equivalent of scientific demonstration for the basis of its doctrines. Under neuroses, therefore, we find only disturbances of the sensibility of the skin included, anæsthesia, hyperæsthesia, and pruritus.

The introductory chapter on the vegetable parasites above referred to is a very interesting *résumé* of our present knowledge of the mycology of the affections to which they give rise. It is not surprising, however, that the author leaves the subject in the same state of obscurity in which he found it, and confesses that we really know nothing of the botanical relations of the parasitic fungi of the human skin. He recognizes only three well-established forms of disease, tinea tonsurans, tinea favosa, and tinea versicolor, throwing out alopecia areata from the list. It is a pleasure to announce that Kaposi relinquishes the opinion, so long maintained by Hebra, as to the identity of the parasites in the first two affections, and admits squarely that the fungi are not the same botanically, and that herpes tonsurans and favus are clinically entirely distinct pathological processes. He also recognizes the existence of parasitic sycosis.

Under animal parasites, he gives figures of the itch insect, although the disease is described at length by Hebra in the first part of the work, and of the various other human epizoa.

Tinea favosa and Tinea tonsurans. — M. Horand communicates[1] his observations upon these parasitic affections, which, although not new, are interesting as confirming the results of other observers. Favus seems to be a much more common disease in France than with us, especially among children, upon whom he has treated it in four hundred and seventy-two cases. He calls attention to its strong resemblance to ringworm when seated upon the general surface, to the infrequency with which the nails are affected, and to its frequent presence upon the rat and cat as causes of contagion, into both of which animals it may be inoculated with ease. He notices, too, its rarer occurrence in cities than in the country. Epilation he regards as the essential, indispensable element of treatment, and parasiticides as of comparatively little importance. With regard to the plant of tinea tonsurans, he found that it occurs commonly upon the cow, dog, and horse, less frequently upon the cat, but that upon the rat it cannot be inoculated. This latter fact, with the results of his experiments upon the simultaneous inoculation of favus and ringworm matter upon the same subject, convinced him of the non-identity of the fungus in these affections, and he expresses the conviction that the transplanting of favus matter upon a patch of tinea tonsurans will destroy the growth of the latter by appropriating its

[1] Extrait du Discours d'Installation. Annales de Dermatologie et de Syphiligraphie, tome vii., No. 4.

nutriment. Attempts to inoculate aspergillus glaucus and penicillium glaucum upon animals failed, and these moulds have, in the author's opinion, no connection with these affections. Tinea tonsurans of the scalp he considers even more difficult to cure than favus, inasmuch as epilation can be less perfectly performed on account of the more fragile condition of the hairs. Tincture of iodine, turbith mineral, and calomel he regards as the best parasiticides.

Alopecia areata. — Dr. Anton Nyström[1] of Stockholm finds in this affection the spores of a fungus almost constantly present, not in the hairs, nor in their roots, but upon them exterior to the follicles, upon the surrounding epidermal scales, and very lightly adherent to them. These spores he believes to be only accidentally present, and to be derived from the bandages which are worn over the heads of the patients. He undertook certain experiments to discover the nature of this fungus *des serviettes*, but the culture was not conducted in a manner to warrant any conclusions from the result (penicillium) obtained. Nyström regards the disease as not really parasitic, but as a fault of nutrition.

Filiariose: an Affection produced by a new Kind of Cutaneous Parasite. — Dr. da Silva Aranjo describes,[2] in a memoir with the above title, a new parasitic disease of the skin in Brazil, produced by a nematoid worm, which he calls filaria dermathemica. The animal is filiform, 0.25m. in length, and of an opaque white color. The egg of the worm penetrates the glandular openings of the skin, and, acting as a foreign body, produces the inflammation characteristic of the disease. The eruption is papular and vesicular, but never pustular, and is accompanied by intense itching, which is increased on exposure of the skin to the air. By scratching, the parasite and its eggs are transferred to other parts of the surface, and thus the disease becomes general. The worm always remains, when undisturbed, in the vesicle, from which it is easily extracted. The disease may be cured by the local use of carbolic acid.

The Use and Value of Arsenic in the Treatment of Diseases of the Skin. — Dr. L. D. Bulkley, of New York, presents in an essay,[3] which was read before the American Medical Association at its last meeting, his latest views upon the rational use of arsenic in the treatment of skin diseases. Its physiological action, in his opinion, is exercised primarily through the nervous system upon the vascular and cutaneous tissues; and its therapeutic value is in virtue of its "neurotonic" properties principally, but also as a "modifier of cutaneous nutrition."

Arsenic in the treatment of skin diseases has been long on trial, and has probably been employed for a generation more universally than

[1] Annales de Dermatologie et de Syphiligraphie, tome vii., No. 6.
[2] Revue des Sciences médicales, tome viii., 1st fasciculus.
[3] New York Medical Journal, August, 1876.

all other remedies combined. It has had most injudicious friends, — those who have claimed for it infallible powers against nearly every functional and organic disease which the complex tissues of the skin present. There have been others, however, who have awarded it a very limited sphere of activity in this field, prominent among whom are some of the most eminent dermatologists and experienced observers, whose caution has led them, without prejudice, to deny it any action which they have not seen to follow directly from its use. The discussion of its real value at this time should be based upon data of fresh and positive character; and dermatologists will hardly be willing to accept again in evidence the opinions of former writers, whose wholesale commendations of the drug have established for them a character of unreliability as scientific witnesses upon the subject, nor statements openly based upon undemonstrated theories of its physiological action. Nothing but the results of positive and repeated observation of its independent action, from reliable and intelligent practitioners will satisfy them as the basis of a new verdict as to its merits. They will not receive as of scientific value from any source such inferences as these: Arsenic is said to improve the natural condition of the skin in healthy men and horses, therefore it should be of service in diseases of the skin; arsenic is given with benefit in some general affections exhibiting a periodic type, therefore it should do or does good in cutaneous affections marked by exacerbations in some of their subjective symptoms; arsenic has been found to be beneficial in the treatment of neuralgia and other neuroses, therefore it must be of benefit in skin diseases which are supposed to be neurotic in character; arsenic is serviceable in rheumatism, therefore in eruptions which are supposed by some to be arthritic, it ought to do good. Nor can we judge of the effect of this or of any drug when given internally, if at the same time other remedies of known or unknown efficacy are used externally upon the skin. It is by such unwarranted and loose methods of inference and experimentation that a large part of the present uncertainty in therapeutics, general and special, is due. It is to be regretted that the author of this essay has openly based his judgment in part "on what is known of its physiological action, and of the nature of the affections to be treated," because these are both largely matters of pure conjecture. Better the most empirical treatment, if its results are intelligently observed and accurately recorded.

To the author's conclusions, therefore, so far as they rest upon inferences of the above character, we must object, as determining anything reliable or definite as to the use of arsenic in skin diseases. On the other hand, what he gives us as the results of his clinical observation simply in individual diseases is of great value, and makes the paper an important contribution to the therapeutics of dermatology.

Of the action of arsenic in psoriasis he says: In very young subjects, of ten or twelve years or under, the disease is comparatively curable, and arsenic should always be given fearlessly, and with very good probability of effecting a permanent removal of the disease. Recent attacks for the first time in older persons may be treated with very encouraging prospects of success, but the remedy should be long and steadily continued. In those who have had the eruption for many years, and have received little or no treatment, arsenic will accomplish the cure in many instances, although the previous irregular use of the remedy diminishes very considerably the chances of success. He advises that it should not only be administered until the eruption entirely disappears, but it should be continued for a period thereafter, varying in proportion to the length of time the disease has previously existed, for months rather than days or weeks. In reply to his own question, "Can arsenic ever cure psoriasis?" he answers directly, "Most emphatically it can;" and yet on a subsequent page he says, "I think I have never seen a case cured by arsenic alone." Whether psoriasis can ever be cured permanently by any one drug or by several combined, used either internally or locally, or in both ways simultaneously, is a question which is from the nature of the disease perhaps impossible of definite answer; but this much may be said, that as permanent relief from its reappearance has followed "cure" by external treatment alone as by arsenic. Yet arsenic is a very useful remedy in the disease.

With regard to its employment in eczema Dr. Bulkley is of the opinion that it is most beneficial in "nervous" cases; in those where there is "an arthritic history, past or present, in patient or family;" and in those where there is "more or less of a malarial element." Eczema of the first sort he defines as that in which the "eruption has a decidedly nervous type, that is, it itches fearfully." How to distinguish this kind of itching from that which is the most constant symptom of the affection in nearly every case we are not informed; nor is any closer definition given for distinguishing cases of the second variety; and the uncertainty of the author's mind concerning the third may be inferred from his question in this connection, whether "the augmented itching of eczema at certain periods may not indicate something of a malarial origin?" These certainly are novel propositions, but until they are presented upon a more scientific and less fanciful basis, it will hardly do to base the action of arsenic in eczema upon them. There is no doubt, however, that it is of occasional service in chronic forms of the disease, to be tested empirically, and the author's observations here are chiefly valuable as showing how tolerant of the drug are young children.

In pemphigus, Dr. Bulkley states that his experience corroborates the favorable opinion held by Mr. Hutchinson concerning the action of

arsenic, one of the three cases in which he had tried it having its progress arrested in twenty-four hours.

In acne, too, Dr. Bulkley is sure that he has seen good results follow its use, and even in acne rosacea he has seen real hypertrophy of tissue diminish a third in size under its administration, when combined with local treatment. In urticaria, sycosis, the vegetable parasites, and even in warts, he is inclined to believe that arsenic is of service directly or indirectly, but the evidence presented for such confidence in its powers seems not at all sufficient to the dermatologist, who has seen its inefficiency so thoroughly demonstrated in so large a proportion of the cases he is called upon to treat.

The author further discusses, at considerable length, the physiological and toxicological action of arsenic, and its various preparations which are used in medicine. In addition to the common Fowler's solution and the Asiatic pills he uses Dr. Valangin's solution, or the liquor arsenici chloridi, an officinal preparation, and considers it "in some respects the best form in which to introduce arsenic into the system." The choice between these remedies he does not regard as an indifferent matter, and would attribute to the base or acid with which the arsenic is combined a not unimportant share in the treatment of a case, according as the system at large demands an acid, or potash, soda, or ammonia. But, certainly, unless we are prepared to accept the Hahnemann doctrine of infinitesimal potencies, the minute quantity of potash contained in the few minims of Fowler's solution daily administered must be a matter of complete indifference to the system at large or its cutaneous envelope. Here, too, we should prefer to see the opinions of the author based upon real experiments made to test the relative merits of the different preparations. As it is, he fails to demonstrate that one form differs from another, so far as their action upon the skin is concerned.

In conclusion, he presents fifteen propositions embracing the substance of his essay in a condensed form, one of which we append. "Arsenic is certainly valuable in psoriasis, eczema, pemphigus, acne, and lichen, in proper cases and when due regard is paid to the secretory organs, and to diet and other elements of general health; of less certain value in lupus, ichthyosis, sycosis, verruca, and epitheliomatous and cancerous diseases; it is absolutely useless or harmful in the syphilodermata, the animal and vegetable parasitic diseases (except in rare cases), in elephantiasis Græcorum and Arabum, in purpura, true prurigo, herpes zoster, scleroderma, molluscum contagiosum and fibrosum, keloid, vitiligo, nævus, etc."

PROCEEDINGS OF THE BOSTON SOCIETY FOR MEDICAL IMPROVEMENT.

F. B. GREENOUGH, M. D., SECRETARY.

OCTOBER 23, 1876. *Double Monstrosity.* — DR. JACKSON reported the case, and exhibited the skeleton and organs. It occurred in the practice of Dr. Joseph Murphy, of Taunton. Labor at the eighth month. Child died during the delivery; weight three pounds, four and a half ounces, and length thirteen and one half inches. There were two heads, broadly connected by integument; and, centrally, a malformed ear or ears; otherwise, two perfect faces; trunk single in front, but posteriorly broader, and two spines were felt. The four extremities were well formed.

The two heads were united by fibrous tissue firmly, but to a small extent, just behind the membrane of the tympanum. The central ribs of the two subjects were intimately fused upon the median line; and, instead of being directed forwards and downwards, as usual, they were directed backwards and downwards, and in form very strongly suggested that of the spinous processes of the adult vertebræ. This formation extended from the fourth to the eleventh pair of ribs; the longest pair, midway, being half an inch in length, and those above and below gradually shortening. The central scapulæ were represented by a minute bit of cartilage.

Just below the double pharynx there was a fusion, and the œsophagus was single and large. There were two hyoid bones, but the thyroid cartilages were fused; and the trachea, throughout its whole length, formed a common canal with the œsophagus. The heart was single, with two pairs of lungs. Unfortunately, very few records were taken at the time of the dissection; but on inquiry of Dr. Murphy, he states, very positively, that there were external female genital organs. The other abdominal organs were not remarkable, so far as a hasty examination showed.

NOVEMBER 13, 1876. *Monstrosity.* — DR. JACKSON reported the case and showed the malformed extremities and internal organs. It occurred in the practice of Dr. D. Choate, of Salem. Labor at about the end of the eighth month. A male child, well formed and living was first born, and the monstrosity followed at once, presenting by the foot. Weight of this last two pounds, eight and one half ounces, and length fifteen and one half inches. Left lower extremity wanting, and its place indicated by a small cutaneous excrescence only. The right was five inches in length and well formed, excepting the foot; there being varus and but four toes, with a broad and deep deficiency between the third and fifth. The left upper extremity was three inches in length; there were two fingers only, but these were well formed. The right was three and one half inches in length; hand bent sharply upon the fore-arm, and, though the four fingers were well developed, there was no thumb. Otherwise the subject was not remarkable externally, excepting for the absence of genital organs and of an anus, and a moderate enlargement of the head that was probably due to hydrocephalus.

The prepared extremities show an absence of the fourth metatarsal bone

as well as of the toe; absence of the radius on each side, the ulna and the right humerus being well developed. The left humerus seems to be well developed, inferiorly, to the extent of about three fourths of an inch; and superiorly a small mass of cartilage is felt connected with the scapula, but between these two portions of the bone there is nothing except muscle. The fingers and toes, with the carpus and tarsus, are well formed so far as they are developed, excepting in the left hand, in which the first phalanx of one of the fingers is broad, and has two metacarpal bones connected with it. The right side of the pelvis is well developed, but the ischium is bent over to the left side and unites, by fibrous tissue, with the left os innominatum. This last is small and irregularly formed, and the ischium is wanting. On the left side the laminæ of the sacral vertebræ form a confused mass of some size.

The internal organs were very unusually malformed. The larynx appeared quite normal at its entrance, but within it ended in a cul-de-sac, and of the trachea there was not a trace to be seen. The lungs were fully developed, but the right was formed of one lobe only, and the left was only partially divided. It is greatly to be regretted that the thoracic organs were necessarily hastily removed, and under very unfavorable circumstances; and some very important points, consequently, were not ascertained. The œsophagus, particularly, which was of full size, was cut off just above the diaphragm, but no trace of a stomach could be found either above or below this last, at the time or on the following day. The heart sent off an aorta and a pulmonary artery from the right ventricle; and the first of these two vessels was the farthest to the right. The opening from the right ventricle into the left was of moderate size. The ductus arteriosus was quite long and slender. In the abdomen there was found a pretty fully developed liver, two renal capsules, a piece of intestine four and one half inches long and one sixth of an inch in diameter, terminating bluntly at each extremity in a cul-de-sac, and filled apparently with secretions. There were also two organs that, to the naked eye and microscopically, seemed as if they might be testicles. These were all of the organs.

Myxo-Sarcoma of the Uterus. — Dr. Hodges reported the case. The patient, a woman aged fifty-three, was troubled with pain about six months ago; two months afterwards a tumor was partially removed from the vagina, and four weeks after that she was etherized and it was thoroughly removed. In four weeks a tumor had re-formed in the vagina, as large as a fœtal head. It was soft, elastic, and covered with a thin membrane, which, during examination, broke down easily, causing a profuse hæmorrhage, which left the patient in a state of collapse and almost pulseless. She rallied, however, under stimulants. A large gelatinous mass, filling the vagina, was broken down with the fingers and removed, a spoon being used to scoop it out.

This mass extended up into the uterus as far as the hand reached; in fact the whole cavity of the uterus seemed to be filled by this material. This operation was performed on May 9th; on May 16th she was pretty well, with a temperature of 100°, and pulse 115. Her mental condition was, however, rather peculiar. On June 4th she had a severe chill, and died June 7th. There was at no time marked abdominal tenderness. At the autopsy, made

by Dr. Fitz, the tumor was found to have recurred to a considerable extent. Dr. Fitz showed the specimen and reported as follows: —

The uterus is enlarged to a size corresponding with that of the third month of pregnancy. From the os externum, which was large and patulous, there protruded a dry, yellow, membranous substance. The enlargement of the uterus was found to be chiefly due to a dilatation of its cavity, though its walls were moderately thickened. The greater portion of the inner surface of the uterus is covered with a soft, pale yellow tissue, translucent in spots, which projects slightly, and presents an everted fungus-like border near the fundus. The lower border, about a half inch from the os, is tolerably sharply defined. The growth extends into the muscular substance of the uterus as an opaque, white, firm infiltration, with an irregular margin near the os internum. The new formation is composed chiefly of small, round, and large spindle-cell tissue, with but little intercellular substance. The more translucent portions consist of round, spindle, and stellate cells, all small and separated from each other by a moderate amount of homogeneous, transparent, intercellular substance, in which are a few delicate fibrils, and which presents the reaction of mucine.

Within the wall of the uterus, above and removed from the sarcoma, were a few small collections of pus, which were continued outwards into the broad ligament as longitudinal purulent collections, apparently within communicating and anastomosing cavities lined with a smooth wall, probably lymph vessels. An abscess of considerable size had formed in this broad ligament, which was adherent to the pelvic walls, and the peritoneal surface of the uterus bore a few patches of recent false membrane. The cause of death seems to have been the extension of the disease into the lymphatics.

Three or four cases of this disease, that is, myxo-sarcoma of the uterus, have been reported in Boston during the last four or five years, but the total number of reported cases is small, as it is only recently that it has been recognized, previously having been looked upon as cancer. This form of disease of the uterus starts from the mucous membrane.

Fibro-Sarcoma of the Leg. — Dr. Beach showed the specimen and reported the case, which had been under the care of Dr. Cabot, by whom the leg was amputated above the knee joint.

The patient, Sarah L., sixty years old, received a slight injury to the leg just below the patella, four years ago. Six months after she noticed a slight swelling at the seat of her former injury. This slowly increased until one year ago it was the size of an egg. Since then it has grown rapidly, and now extends from just below the patella to the middle of the tibia, measuring nineteen inches in circumference and eleven in longitude. Pain at times has been very severe; she has been able to walk perfectly well until within a year.

Dr. Fitz gave the following report of the tumor: —

The tumor is lobulated, of the size of a small child's head, and is intimately connected with muscle and aponeurosis, apparently arising from the latter. The lobules vary in size from that of a bean to that of a hen's egg, some being soft on palpation though hard on firm pressure, and others possessing the density of cartilage. On compression of the softer masses there was the feeling

as if small nodules were present in their interior. The larger lobules could be separated from the fibrous septa surrounding them, while many of the smaller ones seemed to be imbedded in a gray, homogeneous tissue.

On section the softer nodules were composed of a gray, somewhat translucent tissue, while the denser forms presented a white, fibrous appearance. After exposure to the air the color of both assumed a slightly reddish tinge. In certain parts of the specimen yellow patches and red specks indicated fatty degeneration and hæmorrhages. The tumor as a whole contained scarcely any blood-vessels visible to the naked eye. The structure of the gray portions was abundantly cellular, the cells being of a predominant fusiform character. The nuclei were oval, homogeneous, with two nucleoli, as a rule one at each end; many of the nuclei were found free. The protoplasm, finely granular, was relatively slight in quantity. The cells were separated by a fibrous intercellular substance. The latter predominated in the denser nodules, the cells being recognized with difficulty. The addition of acetic acid showed them to be sparsely scattered among the fibres. The arrangement of both was fasciculate. In no part of the tumor could a structure resembling that of a lymphatic gland be found, though the gross appearance bore a strong resemblance to that of a lympho-sarcoma.

Nasal Medullary Sarcoma. — This case also was under the care of Dr. Cabot, and was reported by Dr. Beach.

The patient, a sailor, aged forty-five, was admitted to the Massachusetts General Hospital October 7th. Three years ago the right side of his nose became occluded, and that side was somewhat larger than the other externally. For a year and a half he had no trouble except the inconvenience of the occlusion and the swelling. At that time he began to have attacks of epistaxis, coming on usually every day or two, though at times the intervals were longer, sometimes several weeks passing without any bleeding. He has been treated by several physicians, and says that several times a friable subtance has been removed from his nostrils with forceps, but never any pieces of bone. The swelling of the right side had increased very slowly up to six weeks ago, when it was not very noticeable, but at that time he took a severe cold, and the nose swelled to its present size. At the time of entrance the nose was much swollen, very red and tender, the swelling being more marked on the right side. The right eye was closed. The patient complained of considerable pain in the nose and forehead. On examination, the posterior nares were found to be clear. Cold water dressings were applied, and a weak solution of chlorate of potash was ordered to be used in a nasal douche.

On October 24th the swelling and inflammation had subsided in a marked degree, and there was little or no pain. The patient was examined by Drs. Knight and Wadsworth, who reported, the former that the posterior nares were perfectly free; that anteriorly on the right side there was a polypus, apparently of the ordinary fibro-mucous kind, and the latter that there was sloughing of the cornea of the right eye.

On November 4th Dr. Cabot operated. Tracheotomy was performed, and a tube was inserted. A large sponge was placed above the velum palati, so as to plug the posterior nares. An incision was made, following the contour of

the nose, the arch being carried somewhat above the commissure of the eyebrows, and extending on the right side nearly down to the ala, on the left not quite so low. This incision took off a slice of the upper part of the tumor, it having invaded the subcutaneous cellular tissue. The nasal bones were sawn through, and the flap was turned down over the mouth. The upper portion of the nasal bones was then removed from the frontal processes by the gouge and mallet, and the lateral attachments were severed by curved scissors. The mass was then removed. Sponges with strings fastened to them were put under the flap to provide against hæmorrhage, the strings being brought out of the nostrils. The flap was brought into place and united with sutures. The wound was dressed with a carbolic acid solution, one to forty. The sponges were pulled out through the nostrils the next day, the flap united by first intention all the way round; the tracheal wound did well, and on November 10th, the sixth day after the operation, the patient is reported as being up and feeling about as well as before the operation.

Dr. Fitz described the tumor as follows: The tumor is a medullary sarcoma. The cells were of varying shapes, mainly fusiform, some with projecting arms, and others more or less rounded. They were in general flat and rather scale-like. The intercellular substance was partly homogeneous and partly fibrillated.

DEIRDRÈ.[1]

We take pleasure in acknowledging the receipt of this poem, which has lately appeared in the No Name Series of original American novels and tales. Though its authorship is anonymous, we understand that it comes from the pen of a member of the medical profession, Dr. R. B. Joyce. The scene is laid in the north of Ireland, in times far remote, and the many favorable notices regarding the plot and composition of the poem which have appeared elsewhere, to which we must refer our readers, are highly flattering to its accomplished author.

THE CREMATION OF BARON PALM.

The ceremony which took place last week at Washington, Pa., has excited much interest, and is no doubt regarded by many as an occurrence of great importance. Baron Palm, a native of Augsburg, died last May, in New York, at the age of sixty-seven. His body was immediately embalmed and placed in the receiving vault of the Lutheran cemetery, where it remained till just before the time for cremation, awaiting the completion of the building for that purpose. This was built on the side of an elevation known as "Gallows Hill," a mile and a half to the south of Washington. It is a very simple brick building, one story high, and measuring only thirty by twenty feet. Its erection, including the construction of the furnace, retort, etc., cost about sixteen hundred dollars. Situated in the midst of beautiful natural scenery, it seemed as though everything that was possible had been done to render the spot attractive. The building was divided into two chambers, the first a reception-

[1] *Deirdrè.* No Name Series. Boston: Roberts Brothers. 1876.

room, which was neatly fitted up with a light table or catafalque and a "columbarium." This latter is designed for the reception of the urns containing the ashes of cremation until called for by the friends of the deceased, and in appearance very much resembles a book-case. The second apartment is the crematory, in one corner of which is the furnace. This latter is built of brick, and measures ten feet in length, six feet in width, and six feet in height. Within the furnace is a fire-clay retort of a semi-cylindrical shape, measuring seven feet in length, twenty-four inches in width, and twenty inches in height. The furnace is so constructed that the flames pass under the retort, back of it, and forward over the top to the front, where the vapors and gases from the body mingled with them, and thence back again to the rear by means of separate flues, which there unite to enter the chimney. There is a small hole in the door of the retort for the admission of air, and through this opening the various stages of the process can easily be observed.

The ceremony was fixed for the 6th of December, and on that day a number of physicians and others interested in sanitary matters assembled to witness the process. About thirty invitations had been issued, and many of the prominent boards of health were represented, as were also a large number of leading newspapers of this country and also of Germany, France, and England. The fires had been started at two o'clock in the morning. On opening the casket it was found that the weight of the body had been reduced from one hundred and seventy-five to ninety-two pounds. At twenty-seven minutes past eight o'clock, everything being pronounced ready, the body, lying in the iron cradle and covered with a shroud (which had been previously soaked in alum to prevent its too rapid ignition), and decorated with flowers and evergreen, was placed in the furnace. It is a matter of regret that, as there was no pyrometer at hand, there was no way of ascertaining the exact heat of the retort. In about fifteen minutes the aqueous vapor had all been expelled, leaving the shroud completely charred, but still retaining its form sufficiently to completely conceal the outlines of the body. In an hour the outlines of the prominent bones were plainly visible, and an hour later the incineration was complete, but it was deemed advisable to continue the heat for four hours from the time the body had been first placed in the furnace. During the burning the ordinary draft of the furnace was increased by means of a fan-blower. The body was not removed from the furnace until some twenty-four hours had elapsed, to allow the retort to cool. During the entire process there was no offensive odor, either at the top of the chimney or elsewhere.

The residue left, after the incineration was completed, was three pints of ashes which were carefully collected and, after being sprinkled with perfume, were deposited in an antique vase, which is to be taken to New York by members of the Theosophical Society, and deposited by them in their temple in that city.

The whole experiment consumed fifty bushels of coke worth four cents a bushel. The actual time occupied in cremating the body was two hours and twenty-seven minutes.

It may not be here out of place to state that by the use of the Siemens' furnace the expense of time and money would have been considerably lessened.

His furnace is built on the principle of regenerative heat. Its construction costs about six hundred dollars less than that of Dr. LeMoyne, and it will incinerate a body of two hundred pounds' weight in less than one hour, and at an expense of only seventy-five cents for fuel. The wife of Sir Charles Dilke was reduced to ashes in a furnace of this description at Dresden, in 1874.

In the afternoon a meeting was held at Washington, presided over by J. Lawson Judson, Esq., at which addresses were made by Colonel Olcott on the history of cremation; Rev. George P. Hayes (President of the Washington and Jefferson College) on the bearing of the Bible and Christianity upon the subject of cremation; Dr. James King on cremation viewed from a sanitary stand-point;" Dr. LeMoyne on the general advantages of cremation; Boyd Crumine, Esq., who spoke of the popular prejudices against this method of disposing of the dead; and Mr. Nicholas K. Wade who alluded to the mechanical necessities of a perfect cremation.[1] This event will, no doubt, be thought of great importance by the friends of cremation. It was not needed to show that a body can be speedily, cheaply, and decently consumed, but it has made the subject more familiar to many people and divested it of some imaginary horrors. As to the question of the advisability of making cremation general or obligatory it stands precisely as it did. We do not believe that there is as yet any necessity for it in this country, and we think that it is open to the serious objection of making the detection of crime more difficult. We commend to the attention of our readers the letter from Dr. Adams which appears in this number.

MEDICAL NOTES.

— Subscriptions for the forthcoming volume of Transactions of the International Medical Congress are now being received. As but a limited edition will be printed, gentlemen who wish to obtain copies are requested to forward their names, with the amount of subscription ($6 per copy, in advance), to the Treasurer, Dr. Caspar Wister, 1303 Arch St., Philadelphia, before January 15, 1877. The price of the volume will be raised upon the day of publication.

— The *Louisville Medical News* states that in connection with a poisoning case, now before the courts, the *Union médicale du Canada* relates a curious but little-known episode of another celebrated trial, which took place in Belgium some years since. At one time the prisoner, B., could hope to escape conviction, when a casual observation caused his ruin. The government had called as an expert Mr. Stas, Professor of Chemistry at the Polytechnic School of Brussels, who conducted his experiments on the deceased's intestines in a closed room, in presence of a number of persons. "I beg you, gentlemen," said the professor, "not to smoke; the smell of tobacco is unbearable to me!" "Nobody is smoking," answered one of his assistants. The smell, then, emanated from the viscera of the body itself. An idea struck the eminent chemist like lightning. In an instant the re-agent for nicotia was applied, and the

[1] For many of these facts we are indebted to Dr. Charles F. Folsom, of the State Board of Health, who was present upon the occasion. — Eds.

alkaloid which had been first detected by the smell was proved to be present. Six weeks later B. was executed at Mons. Had Mr. Stas been a smoker the prisoner would have been saved.

— Doctors E. B. Gray and H. M. Tuckwell, physicians to the Radcliffe Infirmary, Oxford, report in the *London Lancet* of November 18th that in thirty-eight cases of *chorea* treated without medicine the expectant treatment was at least as successful as the treatment by medicine; and that the average duration of the disease in these cases so treated without medicine was nine weeks and six days, or exactly the average of Sée's one hundred and seventeen cases treated with various medicines. They declare that they are inclined to rely on isolation, a good nurse, a large crib well padded and walled in with pillows, plenty of nutritious food, without stimulants, until more conclusive evidence can be obtained that the disease can in the slightest degree be favorably influenced by any medicines yet discovered.

These observations are in the right direction. When it is known what diseases will do without medication, and not till then, the beneficial effects of drugs, if any, can be ascertained, and the *best treatment* of the sick, the ultimatum of professional science, be more nearly than hitherto approached.

— In some Notes on Surgical Practice among the Natives in Shanghai, by Edward Henderson, M. D., published in the *Edinburgh Medical Journal* for November, 1876, it is stated that in the opinion of the writer the Chinese — or, at least, the class of Chinese treated in hospitals — are, as compared with Europeans, better subjects for surgical operations. With the former the repair of wounds is less frequently hindered by inflammations; they recover from severe injuries with greater certainty and rapidity, and with less constitutional disturbance than Europeans do. These facts are well shown in the case of head injuries, of which the Chinese appear to be peculiarly tolerant; cerebral concussions and contusions, with or without fracture of the skull, are of frequent occurrence among the natives in Shanghai, and many of the recoveries have been little less than wonderful, both as regards their rapidity and apparent completeness. The results of compound fractures also are, as a rule, more favorable among the Chinese than among Europeans. Illustrations of tolerance of injury are also met with in other than strictly surgical practice. A case is reported in which a foreign surgeon was called to visit a native woman who had been in labor four days. When the surgeon saw her, uterine action had ceased, the shoulder of a dead infant presented at the vulva, being unusually firmly impacted in the pelvis along with part of the trunk. Delivery by turning could not have been effected, and it was with difficulty that the surgeon, Dr. Johnston, could reach and divide the neck of the child. The operation occupied much time, and, when completed, the patient's condition was very critical. On the fourth day, however, she had almost completely recovered, and opened the door for the doctor when he came to visit her.

— Dr. J. Besnier, says *The Medical and Surgical Reporter*, has recently concluded the publication, in the *Journal de Thérapeutique*, of a series of articles on Blistering in Pleurisy, which he had previously read as a paper at the Société Médicale d'Emulation. In these he expresses his surprise that while so much discussion has lately taken place at Paris on the operation of paracente-

sis thoracis, so little has been said about preventing its necessity. This may arise from the operation being principally performed at hospitals, where the patients are not seen until late in the disease; and it has met with little favor in private practice in Paris. For his own part, Dr. Besnier believes that it may almost always be avoided by the employment of blisters, but only on condition of these being applied early, on the first or second day, which may be done safely and advantageously, whatever amount of acuteness of the disease and its accompanying fever be present. If we wait until this subsides, the opportunity is lost, and the means is then of doubtful efficacy.

— Dr. James A. Agnew reports to the *Virginia Medical Monthly* three cases in which he has employed gelseminum as an adjuvant to mechanical means for dilatation of the cervix uteri. The first patient upon whom he tried gelseminum had retroflexion of the uterus. The cervix was small and conical; the os was at the apex of the cone, and was so nearly closed that he could not introduce the smallest laminaria tent. He had two conical bougies made by an ingenious blacksmith — the little end of the smaller bougie being not larger than a knitting needle. Even this small instrument could not be introduced.

While sheathing a bistoury for the purpose of incising the lips of the external os uteri, the influence of gelseminum over sphincteric action occurred to him, and he determined at once to try it. He gave ten drops of the fluid extract of gelseminum every ten minutes until thirty drops had been taken. Immediately after the last dose, without the slightest difficulty, he passed successively the bougies and a No. 1 sponge tent up to the point of flexion. On the fourth day thereafter, he failed in every effort to introduce a No. 2 sponge tent until the fluid extract of gelseminum had been given as before. After this was given, the tent was readily passed up to the point of flexion; and, to his great satisfaction, after a little manipulation, it passed this point, and there was no further trouble in the operation of dilatation. He has tried gelseminum in two other cases, with equal success.

— We learn from *The Medical and Surgical Reporter* that at the meeting of the American Pharmaceutical Association, this fall, it was stated that the total imports of drugs for the fiscal year were four hundred and seventy-six million dollars, while the total exports were five hundred and ninety-six million dollars, leaving a balance in our favor of one hundred and twenty million dollars.

The character of many of the powdered drugs of the market was alluded to, and their quality hinted at by the comparative prices at which they were sold, and the value of good crude drugs. Borax was exported to the extent of three million pounds, while California and Nevada have produced in all during the year six million.

The Pacific Coast has furnished during the year fifty-four thousand flasks of mercury, while less than that has been produced by all the other nations of the world combined. The product of opium was stated to be smaller in amount for the year than was anticipated, and it would probably advance in price still further.

THE SANITARY ASPECT OF CREMATION.

MESSRS. EDITORS, — As the cremation of the body of the late Baron de Palm at Washington, Pa., on the 6th inst., revives to a certain extent the popular interest in cremation, I wish to make known a fact which adds completeness to my paper on Cremation and Burial published in the Sixth Annual Report of the State Board of Health. As the result of my investigations regarding the supposed injurious influence of grave-yards and cemeteries upon the public health, I was able to find only a single case in this country in which sickness could be fairly attributed to a cemetery, and that case I was unable to investigate sufficiently, owing to the removal of my correspondent to another State. A few months after the publication of the report, however, I was able to look into the case more thoroughly, and found that in this, as in all the other suspicious cases which had come under my notice, the cemetery could not be held accountable for the sickness. The case in question was at Lenox, Mass. Dr. Davis had reported that more sickness prevailed in certain houses near the foot of the hill on which the cemetery is located than in any other part of the village. The bottoms of the graves were much higher than the bases of the houses, and the natural drainage of the cemetery was in their direction. He attributed the sickness to poisoned wells.

On personal inquiry and inspection of the premises, I found that the sickness referred to consisted of several (I think three) cases of typhoid fever, which originated in the house nearest to the cemetery, situated about twenty-five yards from the inclosing fence, and on a much lower level, a road passing between. The well from which the family was supplied with water was far in the rear of the house, at the foot of a steep hill, and about one hundred and fifty yards from the cemetery, which was by no means crowded and had no recent graves very near the house in question. The soil was an impervious "hard-pan." The well-water was analyzed by Professor Nichols, of the Institute of Technology, and found to have no trace of contamination, but to be remarkably pure. The cellar of the house was dry, clean, and odorless, the wall well cemented, and there was no sign whatever of any percolation from the cemetery; neither had any odor ever been perceived outside the house. Having failed to trace the cause of the sickness in any way to the cemetery, I was, on the other hand, successful in finding a sufficient and probable cause within the house. On the second floor, connected with the back hall, was a slop-sink, of which the waste-pipe was trapped in the cellar only, and which emitted a decided smell, the only escape for it being through the hall and the rooms opening upon it. All of the persons attacked with fever slept in rooms opening upon this back hall, near the slop-sink, and must have breathed the vitiated air every night. I think it may therefore be said that the cemetery was not responsible for the sickness.

This disposes of the last case on my list in which a cemetery was held under suspicion. My investigations, therefore, have failed to establish a single case in this country of sickness caused by cemeteries, although I sent out nearly five hundred circulars of inquiry, to one hundred and seventy-one of which I received answers. Although others will very likely be successful in bring-

ing to light a few such cases, it must be considered settled that the effects of cemeteries as disease-producing agents are utterly insignificant when compared with the ordinary domiciliary causes of pythogenic diseases.

The over-crowded, pestilential grave-yards upon which the cremationists build their sanitary argument are things of the past, and, both in this country and in Europe, the sanitary laws are sufficient to render them hereafter impossible; cremation, therefore, becomes merely a question of sentiment and convenience, especially in our own sparsely-populated country. It is a process which, if performed at a sufficiently high temperature to render combustion complete and to destroy all noxious gases, is open to no practical objection, except that it might prevent the detection of crime. But this is an objection which can easily be met, and, as the process has, from a sentimental point of view, much to recommend it, it is quite likely to become a not infrequent method for the disposal of the dead.

J. F. A. Adams, M. D.

Pittsfield, Mass., *December* 2, 1876.

LETTER FROM BALTIMORE.

Messrs. Editors, — We gladly seize this opportunity to state a few facts recently reported with reference to the Maryland State Hospital for the Insane. It will readily be seen that the treatment of the inmates of this institution leaves nothing to be desired, and that thus another verification is added to Dr. Bucknill's refutation of certain foreign aspersions upon the treatment of the insane in America in general. Spring Grove Asylum, as it is more familiarly styled, was removed from East Baltimore to the new institution erected by the State near Catonsville a few years ago. Recently it came under the administration of the present board of officers, consisting of President, Professor C. W. Chancellor; Secretary, Professor Thomas R. Brown; Medical Superintendent and Treasurer, I. S. Conrad, M. D.; Assistant Physician, R. J. B. Broome, M. D., who have already accomplished much, and promise more. There are now in the building some four hundred patients; fully fifty per cent. of these pay their expenses, the balance being charity patients. The institution can accommodate many more, and, should the number of non-paying patients increase, the necessary appropriations will not long be wanting from a community noted for its public spirit. The building itself, situated on a fine site, to which fresh breezes from the bay and pure air on all sides have access, is in the form of an *échelon*, with entrance to the east. The extreme quiet as the visitor approaches speaks of order and discipline obtained rather by kindness than by force, the interior having more the air of a home than of a place of confinement.

A wide corridor paved with marble tiles pierces the centre; on the right are the offices and dispensary, and on the left the library, consisting of upwards of seven hundred volumes, given by the late Dr. Fisher. Records are kept of books loaned to patients, such only being allowed as are suited to their condition of mind. The distinction between patients is made entirely from their mental qualities and not from their ability to pay for accommodations, and

it were well if this broad and spiritual classification were carried out in all institutions of this kind. It will thus be seen that an indigent patient receives the same kind care and attention, the same table and bed, as those who pay. The peculiarities of patients, as well as their weaknesses, are studied and watched, being indulged or curtailed as the best medical advice may indicate, and suitable amusements and recreation are provided; in short, everything conducive to make them contented and happy. Each wing of the building is divided into nine classes, ranging according to the degrees of insanity. All the rooms are neat, cleanly, and comfortably furnished, and the general sanitary arrangements, including ventilation and drainage, are good. The fire arrangements are better than in any other institution of this kind in the country. Plugs connected with reservoirs and hose are placed throughout the building, and the attendants are thoroughly drilled and ready in case of an alarm.

The patients are quiet, tractable, and well clothed, the clothing furnished by the institution being graded on the same mental basis. The absence of the "strait-jacket" was noticed except in one instance. A couch is ingeniously arranged for patients who refuse to lie down at night. There is a fine lecture-room with a stage in the building, and there is a large garden attached. The sale of plant-slips and flowers during the year is sufficient to cover the gardener's wages as well as all greenhouse expenses. Early vegetables are raised, and the lettuce and celery beds now present a creditable appearance. Those patients who have a *penchant* for agriculture or horticulture are allowed to assist the gardener at his work.

The laundry building is in the rear of the hospital proper, and is superintended by attendants assisted by patients. It is provided with washing-machines, etc., and all the labor done in this and in other departments by inmates is entirely at their option. The apparatus for heating the building is in the laundry, and is of the latest and most approved pattern. In the grounds is an artificial lake, which will furnish fish in summer and ice in winter. A bowling-alley, billiard room, and reading-room are at the disposal of the more docile patients, who play sometimes at chess or cards. Another feature is the weekly hop. The cuisine is well kept up. At eleven P. M. the retiring bell sounds.

We might dilate still further upon this model institution, but enough has been said to show that it is one of many of which America has reason to be proud, and that it will compare favorably with any establishment of its kind in England, in some of the medical journals of which country it is to be regretted that remarks disparaging our institutions have appeared, though they were not countenanced by the Medico-Psychological Association at their annual meeting held at the London College of Physicians July 28th.

G. H. B.

BALTIMORE, *November* 16, 1876.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DECEMBER 2, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	427	20.92	29.35
Philadelphia	825,594	317	19.97	22.24
Brooklyn .	506,233	213	2 188	24.92
Chicago . .	420,000	162	20.06	19.75
Boston . .	352,758	136	20.05	26.20
Providence	101,500	33	16.91	19.02
Worcester .	51,087	12	12.21	20.91
Lowell . .	51,639	28	28.19	20.55
Cambridge	49,670	13	13.61	23.31
Fall River	50,372	12	12.39	23.99
Lawrence .	36,240	20	28.69	25.96
Lynn . .	33,548	11	17.05	19.23
Springfield	32,000	2	3.25	20.93
Salem . .	26,344	14	27.41	22.92

Normal Death-Rate, 17 per 1000.

OBITUARY.

It is with deep regret that we record the death of Jairus Greenwood Bridgham, which occurred at the City Hospital last week. The deceased was one of the house physicians, and had discharged his duties with rare faithfulness and ability. The cause of his death was scarlet fever, which he contracted while at his post. His death removes from the profession one whose future was of unusual promise.

Boston Society for Medical Observation. — A regular meeting of the society will be held on Monday evening next, at eight o'clock, at its rooms, 36 Temple Place.

Dr. Fitz will read a paper on Sudden Death from Embolism.

Books and Pamphlets Received. — Annual Report of the Surgeon-General of the United States Army. 1876.

The Twenty-First Annual Report upon the Births, Marriages, and Deaths in the City of Providence for the Year 1875. By Edwin M. Snow, M. D.

Public Health Reports and Papers (Vol. II.) presented at the Meetings of 1874 and 1875. New York: Hurd and Houghton. 1876. (For sale by H. O. Houghton & Co.)

Atlas of Skin Diseases. By Tilbury Fox. M. D., etc. Parts 6, 7, 8, 9, and 10. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Healthy Skin. A Popular Treatise on the Skin and Hair. By Erasmus Wilson, M. D. Eighth Edition. Philadelphia: Lindsay and Blakiston. 1876. (For sale by A. Williams & Co.)

Modern Therapeutics. A Compendium of Recent Formulæ, etc. By George H. Napheys, A. M., M. D. Fourth Edition, re-written and enlarged. Philadelphia: D. G Brinton. 1877.

Transactions of the Colorado State Medical Society. Denver. 1876.

Report of the Board of Health of the City and Port of Philadelphia to the Mayor, for the Year 1875.

A New Method of Treating Hæmorrhage after Abortions and at Full Term. By H. Otis Hyatt, M. D. (Reprinted from the American Journal of Obstetrics and Diseases of Women and Children, October, 1876.)

THE BOSTON
MEDICAL AND SURGICAL JOURNAL.

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A CASE OF ECTROPION TREATED BY TRANSPLANTATION OF A LARGE FLAP WITHOUT PEDICLE.

BY O. F. WADSWORTH, M. D.

THE following case is one of deformity in consequence of a burn, successfully operated on by a method recently proposed and carried out by Mr. Wolfe, of Glasgow; a method which consists in the transplantation of a large piece of skin, without pedicle, upon the surface of a fresh wound. Mr. Wolfe published, in the *London Medical Times and Gazette*, June 3, 1876, a brief account of two cases of ectropion thus operated on. This method offers so important an improvement in our means of dealing with deformities resulting from cicatricial contraction following injuries that now, in its infancy, any instance of its successful application appears worthy of notice. It must prove particularly valuable in cases of destruction of part or the whole of the skin of the eyelids. At the worst, even if the transplanted skin should not live, the condition of the parts still remains as good as before the operation, while, on the other hand, if a flap taken from the neighboring skin sloughs, the effort of the surgeon has resulted only in rendering the deformity greater than ever. The face, on account of the great vascularity of its tissues, offers, of course, a specially favorable ground for the performance of the operation; whether it can be effectively employed in other parts of the body remains to be seen.

A healthy, well-grown girl of sixteen years, who had been burned on the left side of the face while an infant, was brought to me by her father in the latter part of July, 1876. A cicatrix, not generally very dense, involved all the skin in the vicinity of the left orbit. The left eyebrow, its hair follicles in part destroyed, was dragged downward so as to stand at a considerably lower level than the right; the upper lid was much shortened, and the lower so much pulled down that its conjunctiva was completely everted. On attempted closure of this eye a space remained open between the lids throughout their whole length, narrow at the outer part, but some 2″ in width between the puncta lachrymalia. There was moderate thickening of the conjunctiva of the lower lid thus continuously exposed. The cornea had continued normal.

July 30th, the patient having been etherized, an incision was made through the skin of the lower lid, parallel to, and 1½″ below the lashes. The inner extremity of the incision was just below the punctum, and it extended outward half an inch beyond the outer canthus. The tissues were dissected till the edges of the lid could be easily raised far enough to reach the upper lid and allow replacement of the everted conjunctiva. Then the two lids were fastened together by four sutures passed through their free edges. This left a raw surface 1⅝″ in a horizontal, and ⅝″ in a vertical direction at their widest part. Next, a portion of skin was removed from the inner side of the fore-arm, about 2½″ by 1¼″ in size. This was dissected off as cleanly as possible, to avoid the presence of subcutaneous connective tissue, and after separation was laid with its inner surface upward across the fingers of the left hand, while a few shreds of connective tissue still adherent were removed with curved scissors. Its inner surface, thus prepared, was quite as pale as the outer, very nearly smooth, dotted with minute depressions filled with fat cells, and recalled in some degree the appearance of the outer surface of a side of sole leather. It was scarcely ½″ in thickness. The shrinkage on removal was very considerable, ble, and the detached skin when spread out on the clean, raw surface of the lid was barely more than sufficient to cover it easily. At this part of the operation a little difficulty was experienced, since the thin layer of skin tended to roll in on its under surface, and to obviate this tendency, at one point just below the outer canthus, where the surface of the wound made a double curve, two fine sutures, $\frac{3}{16}$″ apart, were placed. Gold-beater's skin was laid over the lids and covered by thick layers of cotton-wool secured by a flannel bandage. The sound eye was also bandaged to secure immobility. The edges of the wound in the fore-arm were dissected up and brought together.



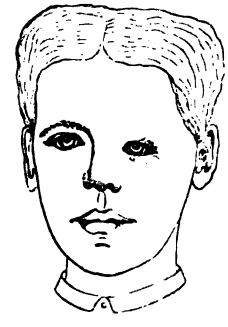
The dressing was not disturbed for forty-eight hours. At the end of that time the bandage and cotton-wool were removed. Through the transparent gold-beater's skin it was seen that the outer two thirds of the transplanted piece lay quite smooth, its color normal, and its edges in exact juxtaposition to those of the surrounding skin, while only a thin, dark line marked the boundary between them. There appeared to be absolutely no swelling. The inner third of the graft was somewhat uneven, and the inner two of the sutures intended to hold the lids together had broken away and allowed the lower lid to fall down a little. Some mucus and tears had run out from the conjunctival sac and smeared the innermost portion of the graft and the skin about it. To remove the mucus a part of the gold-beater's skin was cut away and the skin washed with a weak solution of carbolic acid. A little cotton moistened with carbolic-acid solution was laid over the inner canthus, and the packing and bandage were renewed.

The next day the graft was everywhere in good condition. Even at the inner corner, where its edge was a little raised and at first appeared unattached, a minute fragment snipped off with scissors seemed alive. Cleansing and packing were repeated daily. The gold-beater's skin was removed on the fifth day after the operation, the bandage was omitted, and the sutures holding the lids together were removed on the eighth day. The graft was now everywhere firmly united, although furrowed horizontally along its entire length by a shallow fold.

On the tenth day I found the edges of the graft at some spots a little thickened and paler, and feared suppuration might be taking place beneath, but this proved to be only the commencement of a throwing-off of the horny layer of the epidermis, the same process as is well known to occur in the ordinary minute skin grafts. It was five or six days later before the horny layer was thrown off over the whole surface.

The girl was sent home eighteen days after the operation. Union was everywhere perfect, the ectropion completely relieved, and the dragging





down of the brow considerably lessened, but still the lids could not be brought quite together over the inner half of their length. The graft then measured $1\frac{3}{8}''$ by $\frac{3}{8}''$.

Four months from the time of operation the patient was seen again. The ectropion was still entirely relieved, and she had been able to attend school regularly without inconvenience, though the lids hardly closed as much as at the time she went home. The engrafted skin had become a little narrowed at its inner end perhaps, but it yet measured $1\frac{3}{8}''$ in length and $\frac{3}{8}''$ in width at the widest part. It showed but little difference of level from that of the surrounding skin. The day was cold, and the new skin appeared considerably paler than the skin about it; this paleness, as was to be expected, was stated to be more marked on exposure to cold, but to be gradually becoming less noticeable.[1]

The shrinkage of the thin layer of skin removed to form the graft

[1] The cuts were made from photographs taken the one immediately before, the other four months after the operation. The size of the photographs was not exactly the same, but it was thought best to reproduce them as they were.

was decidedly greater than that which occurs in the flap of much greater thickness and retaining its connection by a pedicle, which is ordinarily employed in plastic operations, and this fact should not be lost sight of in estimating the size of the flap to be taken. How large a surface may be successfully covered by this method at once can be determined only by experiment. The surface covered in the case reported was larger than that in either of Wolfe's cases; in each of those it was about the same size and somewhat less in length than the free border of the lids. If the attempt were made to cover a much larger surface at one operation it would probably be better to apply more than one graft, both on account of the greater convenience this would give of obtaining sufficient skin for the purpose, and because the difficulty of getting the thin graft to lie flat must increase with its size.

Wolfe took the precaution to set the flap so that the edges of the surrounding skin overlapped it and answered the purpose of stitches. The experience of the above case shows that such a procedure is evidently unnecessary, and certainly if employed here, union at the edges could not have taken place so readily and evenly. Of course the surface laid bare should be made as smooth and clean as possible, and hæmorrhage from it should be checked before the graft is placed in position.

But is it absolutely necessary that the transplanted material should be so thin and so carefully freed from all subcutaneous tissue? Wolfe was led to think so from observing the behavior of flaps in which connection was retained by a pedicle, where the operation was only partially successful. The occurrence of serous discharge and suppuration in such cases he regarded as the result of an effort to throw off the connective tissue previous to adhering. This consideration is not, however, convincing. A stronger argument is found in the fact that in his first case, in which the flap was divided into three pieces, one piece, supposed to have been sufficiently freed from connective tissue during removal, was placed in position without further preparation and in great part sloughed, while the other two pieces, from which the connective tissue was carefully cleared after their removal, lived. Moreover, experience has shown the successful application of minute skin grafts to be dependent on their freedom from subcutaneous tissue. More evidence is desirable definitely to settle the question.

PAIN AS A SYMPTOM IN FACIAL PARALYSIS, AND ITS CAUSE.[1]

BY S. G. WEBBER, M. D.

WHEN describing facial paralysis many or most authors make no mention of pain as an accompanying symptom, unless it is stated that

[1] Read before the Boston Society of Medical Sciences.

sensation is not affected. Erb, in Ziemssen's Cyclopædia, mentions that there may be a complication with diminished sensation in the region of the fifth nerve. He also mentions neuralgic pain as a prodrome, and pain in the region of the ear and that half of the face affected, sometimes hours or days previous to the paralysis, as was seen in one of the following cases. (Case V.) But he does not mention that pain is a frequent accompaniment of facial paralysis which sometimes does not appear until after the paralysis.

In more than half the cases of rheumatic facial paralysis which I have seen, this symptom is mentioned. I have seen but one case of traumatic facial paralysis, following a blow on the side of the head; in that case pain was not mentioned. Instances of paralysis from diseases within the cranium would hardly come within the design of this article.

A brief review of several cases will show the nature of the pain, its distribution, and its relation to other symptoms. Unfortunately, many of the cases were imperfectly examined in regard to taste, salivary secretion, and hearing.

Case I. Miss F., about three weeks before I saw her, was exposed to a draught of air in the cars. The next morning on waking she found the left side of her face paralyzed. This was a characteristic case with loss of reaction to the faradic current, reaction retained for the galvanic current; the muscles responded to five or eight cells, the facial nerve slightly to ten cells; no diminution of hearing, no diminution of sensation; taste about equal on the two sides; the right pupil reacted to light better than the left. For two or three days after the origin of the paralysis there was pain in the left ear. This pain was not severe. The patient attended only a few times, but I subsequently learned that there was much improvement, though not complete recovery.

Case II. Mr. A. H. C. was never very strong. Three years before I saw him he was riding in a sleigh exposed to a cold, keen wind, in one of our western Territories. He was chilled, and caught a severe cold. He woke next morning with paralysis of the right side of his face. During the afternoon of the next day he had severe pain in the right jaw, which lasted a few days, diminished slowly, and finally disappeared. At times the pain extended over the whole of the right side of the head. When seen three years after, the right side of the face was completely paralyzed, no voluntary motion, the eyelid not fully closed, taste diminished if not lost on right side of tongue; when he winked, the right angle of the mouth was twitched up, and on closing the eye that angle of the mouth was drawn up. Watch was heard at two and one half feet on right, at eight feet on left. A very strong faradic current caused some motion of the muscles on the right (which muscles moved is not stated); fifteen to eighteen cells caused a slight motion on right and much stronger action on left.

Case III. Mrs. T. gave the usual history of paralysis on the right side after riding in the wind. There was pain on the right side behind the ear, which streamed up to the eye and down the neck and along the lower jaw; this pain continued more or less for a fortnight. For several days the teeth on the right side ached. There was a tender spot behind the ear. There was in this case a slight loss of sensation on the right side. Over the malar bone two points were recognized at half an inch on the left, and only when an inch apart on the right; over the lower jaw at half an inch on the left, and only when three fourths of an inch or more distant on the right.

The patient said the tears did not flow from the right eye, and the right nostril did not discharge mucus; there was dryness and canker on the right side of the tongue; the taste was not noticed to be deficient by patient.

All the muscles of the right side of the face failed to respond to the faradic current. When the galvanic current was used the muscles reacted to fifteen cells; the nerve reacted to twenty cells, which caused the muscles at the angle of the mouth to move. Mrs. T. called but a few times at first, as she was then out of town and the trip to the city was too fatiguing. Subsequently she was seen again, and improved very much under electrical treatment.

Case IV. Mrs. J. J. B. was sent to me by Dr. Edson of this city. She was confined early in November, lost considerable blood, and nursing was a severe tax. Four weeks after confinement the left side of her face was paralyzed, and this paralysis slowly increased until at the end of the third day it was at its full development. There was severe pain behind the ear and running down the neck to about the angle of the jaw, which continued ten days. Sensation was somewhat impaired. When seen there was total paralysis of the muscles of the left side of the face; there was no affection of taste; the palate was straight, and the watch was heard at five feet with the right ear, and at ten feet or more with the left ear. The faradic reaction was entirely lost on the left. The galvanic muscular reaction was exaggerated on the left for the muscles about the mouth. A little more than two months after the origin of the paralysis the nerve reacted to thirteen cells, and a few days later voluntary control was regained to a slight degree, and the muscles of the lower part of the face responded to the faradic current.

Case V. Mrs. H. was sent to me by Dr. C. J. Blake. She had had severe pain in the left side of her face, especially in and behind the ear. There had been tender points over the mastoid, also at each point of exit for the branches of the fifth nerve. There was at first diminished sensation over the parts where pain was felt, later hyperæsthesia. After this she found in the morning that she could not shut the left eye, and the face was drawn to the right. When seen two weeks after the

origin of the paralysis, the pain still persisted, at times so severe as to prevent sleep; there was a tender spot behind the ear at the point of exit of the auricular nerve. The eye was only partially closed; the whole of the left side of the face was paralyzed. The faradic current caused the orbicularis palpebrarum to contract, but all the muscles about the mouth did not respond. The reaction to the galvanic current was perhaps slightly diminished, but a few days later was increased. The power of the will was nearly recovered in ten days, and then the galvanic current applied to the facial nerve caused the muscles to contract.

It is evident that in this case all the fibres of the seventh nerve were not equally affected, for some lost their reaction to the faradic current, and others, while paralyzed, still retained that reaction. In this respect there is a resemblance to the case reported by Bärwinkel.

Several points of interest in these cases must be passed without comment: as variations in hearing between the two ears, the condition of the sense of taste, and the change in reaction to the faradic and galvanic currents while the patients were under treatment. The object of this paper does not include these subjects.

These cases are sufficient to illustrate the point under consideration, and are the only ones where the nature and the seat of the pain were accurately recorded; in others the report is indefinite.

As to the cause of this pain, it is quite possible that the fifth nerve in passing through the foramina to reach the face should be affected similarly to the facial, and this was probably so in Case III., where there was diminished sensation over the malar bone and over the jaw; perhaps the same is true of Cases IV. and V., where the physicians stated that there had been some defect in sensation, without specifying exactly the region affected. In such cases there would be a combined rheumatic affection of the facial nerve and certain branches of the fifth pair; but this explains only a few cases, since many times the pain has been confined to regions not supplied by the trifacial, or at most supplied by that in common with other nerves. In seeking for an explanation of the distribution of the pain, and in deciding whether a rheumatic affection of the facial alone will explain it, we must notice the anastomoses of that nerve. These are numerous; the anastomosis with the auditory nerve would not give the facial any sensory fibres; next is the greater superficial petrosal nerve, which unites the ganglion geniculatum of the facial and the spheno-palatine ganglion. In this nerve are found motor fibres which pass to the muscles of the soft palate, also probably sensory fibres of taste which pass from the fifth to the seventh, subsequently to return by the chorda tympani; it is quite possible also that fibres of common sensation pass from the fifth to the seventh, though this is not proved. Next is the anastamosis with the

tympanic plexus; this plexus receives branches from the carotid plexus, from the otic ganglion and from the glosso-pharyngeal nerve. It is impossible to decide as to the direction or nature of the fibres passing through this anastomosis. The chorda tympani unites the facial with the third division of the fifth; the fibres for taste pass through this from the facial to the tongue; it is also probable that a few motor fibres pass from the facial to the muscles of the tongue; secretory fibres pass from the facial through the chorda to the submaxillary and sublingual salivary glands; it is improbable that fibres of common sensation pass from the fifth through the chorda to the facial. Just before its exit from the stylo-mastoid foramen the facial receives an anastomotic branch from the auricular nerve, which is a branch of the pneumogastric, and passes through a canal in the temporal bone crossing the facial nearly at right angles. By this anastomosis it is almost certain that the facial receives sensitive fibres. The auricular nerve, after leaving the mastoid canal, forms another anastomosis with the posterior auricular of the facial. After leaving the stylo-mastoid foramen the facial sends a branch which anastomoses with the glosso-pharyngeal, but whether it receives sensitive fibres or merely gives motor fibres to the branch of the glosso-pharyngeal to which it sends its anastomosis is not certain. On the cheek near the anterior border of the ascending ramus of the lower jaw an anastomosis is formed between the branches of the facial and the auriculo-temporal, a branch of the third division of the fifth. The terminal branches of the facial and the fifth frequently anastomose with each other; there are also anastomoses with the branches of the cervical plexus.

Of these various anastomoses, those which are the most important as possibly contributing to the supply of sensitive fibres to the facial are the greater superficial petrosal and the auricular nerves, especially the auricular. This latter nerve is a branch of the pneumogastric which arises from the jugular ganglion or from the trunk of the nerve just below, receives a small branch from the petrosal ganglion of the glosso-pharyngeal, and enters the mastoid by a special canal. This canal crosses the Fallopian aqueduct nearly at right angles, and at the point of crossing the auricular and facial form an anastomosis. The terminal branches of the auricular are distributed to the external auditory meatus and to the auricle. Another anastomosis with the facial is also found near the exit of the auricular from the mastoid process.

It will be seen then that the facial nerve receives sensitive fibres while it is still within the bony canal, and it is not at all surprising that the same rheumatic swelling which causes the paralysis should also give rise to pain. In studying the distribution of this pain the anatomy of the auricular nerve is especially important. In Cases I. and V. the pain was in the ear; in Cases I., III., IV., and V., behind the ear; in Cases

II., III., and IV., along the lower jaw; in Case III. it streamed up to the eye, and in Cases II. and V. the whole of the side of the face was at times affected. In most of the cases the pain was in the ear and behind the ear, the regions to which the auricular nerve is distributed; and in Cases III. and V. there was a tender spot behind the ear at the point of exit of the auricular nerve.

The anastomosis of the auriculo-temporal nerve with the facial occurs only after the division of the latter nerve external to the stylo-mastoid foramen. The lower of the three branches of the facial is not a factor in this anastomosis. The sensitive portion of this lower branch must then be derived either by sensitive fibres turning back at sharp angles and then taking another turn, or it must come from a previous anastomosis. The latter is more probable, especially as the lower border of the ramus and the angle of the lower jaw does not receive sensitive fibres from the fifth. Thus the pain along the lower jaw in Cases II., III., and IV. would be explained by the implication of the auricular before sensitive fibres are given to the facial, or by an affection of the latter after receiving such fibres. In no case was pain referred particularly to the front of the ear alone.

The cases in which more extensive pain was felt may have been, as already suggested, due to an affection of the fifth nerve in its foramen. There is, however, another explanation which might be true in some cases. The auriculo-temporal nerve passes round the neck of the jaw, between it and the styloid process, and it is only slightly separated from the facial nerve. The same influence which caused a rheumatic affection of the facial might act upon this nerve and so cause pain in the side of the face. It is almost an every-day occurrence to notice that in case of severe pain the sensation is not limited to the region of the nerve affected but is referred to other parts in the vicinity; hence a referred or reflex sensation of pain may explain the general headache of which patients sometimes complain. Inasmuch then as pain in all these cases was felt in the region over which the auricular nerve is distributed, as in two cases there was a tender spot at the point where this nerve makes its exit from the mastoid process, and as this nerve passes through a bony canal which communicates with the canal through which the facial passes, it is reasonable to conclude that the same lesion which causes the facial paralysis causes the pain; sometimes the rheumatic swelling commences in the sheath of the auricular; then pain is the first symptom, as in Case V. Sometimes the facial is first affected; and in either case the lesion extends by contiguity to the other nerve, or both may be affected simultaneously.

SCARLATINA COMPLICATED WITH TYPHLITIS; FATAL ON THE SEVENTH DAY.[1]

BY C. ELLERY STEDMAN, M. D.,
Visiting Physician, Boston City Hospital.

J. G. B., house physician, City Hospital, twenty-one years old, with the exception of scarlet fever when eight years of age, had never been ill. He had been working hard since July, and went to the Centennial at Philadelphia in October, since which time his attention to his duties was unremitting, and he began to wear a somewhat tired look, although his health was vigorous. Several cases of scarlet fever had been treated in the isolating wards, and a fresh one came under his charge about a week before his illness. Another interne who had never had scarlatina was exposed like himself, but was in bed only twenty-four hours with a slight pharyngitis and a doubtful eruption.

On December 2d, Mr. B. complained of headache, severe backache, sore throat with some dysphagia, anorexia, chilliness, and general malaise. He kept about his duties with difficulty. His expression was dull, the fauces were congested, and at night all the symptoms were aggravated.

December 3d. Though feeling worse he persisted in making the morning visit, after which he was compelled to go to bed; he did not vomit, but the throat was much sorer, and at night his temperature was 103.8°; pulse, 105.

December 4th. Throat felt very sore, much dysphagia, nasal passages nearly occluded. Tongue moist, red, with prominent papillæ at tip, and white coat posteriorly; the whole throat very red, and mucous membrane swollen; a punctated redness around and upon the uvula; abundance of stringy mucus on tonsils and pillars of fauces, which had also a filmy coat like that of early diphtheria. There was also considerable mental dullness when not aroused, and some abdominal pain referred to the umbilical region, which he considered to be due to constipation during the previous three days. His bowels had always acted with perfect regularity. There were several attacks of epistaxis during the day. A bright scarlet eruption appeared on the chest extending less thickly over the abdomen; none was seen upon the legs. Bowels moved by enema. Full doses of bromide of potassium failing to give sleep, morphia, gr. one eighth, secured it. Temperature, A. M. 99.7°; P. M. 101°. Pulse, A. M. 89; P. M. 72.

December 5th. Much more comfortable, general pains nearly gone. Throat less sore, skin cooler, pulse good, and everything promised a good result. Towards evening he began to have colicky pains around

[1] Communicated to the Boston Society for Medical Improvement, December 11, 1876.

the umbilicus for which laudanum stupes were applied, and relief not being obtained, morphia was given subcutaneously. Temperature, A. M. 99.7°; P. M. 101°. Pulse, A. M. 80.; P. M. 72.

December 6th. Slept well till two A. M., when he was aroused from sound sleep by severe pain in the umbilical region and right side, and required considerable morphia for relief. The pain persisted in varying degree all day. The pulse remained nearly normal, and the skin kept moist and cool. Towards evening the pain was almost wholly referred to the right iliac region and was very severe, all motion being painful. Decubitus on back with one or both legs drawn up; abdomen tender on pressure in the regions mentioned, soft and not tympanitic; much tenesmus, urine free and normal. The eruption appeared only on the surface covered by his undershirt. The countenance remained bright, and the patient said if it were not for the pain, he should feel "first-rate." He had taken sufficient liquid food, but now began to have nausea and vomiting. Enema with oil terebinth ʒij caused a small dark, offensive dejection. Pulse, A. M. 72; P. M. 78. Temperature, A. M. 98.7°; P. M. 100.7°.

December 7th. The pain during the night was so severe as to require several doses of morphia. Strawberry tongue; pulse, of good strength. Took less nourishment as the nausea became troublesome, lime-water and milk being most acceptable. The eruption diminishing on trunk, showed slightly on the legs and feet; the patient ceased to complain of the throat, and lay on the back with his legs drawn up; towards night the abdomen grew tympanitic, and had a board-like feeling. He breathed with difficulty because of pain in the right hypochondrium, and was greatly annoyed by hiccough and eructations. The nausea was somewhat relieved by sinapisms to the epigastrium. Urine free; specific gravity 1031; urea much increased; no albumen. Temperature, A. M. 100.9°; P. M. 104°. Pulse, A. M. 90; P. M. 98.

December 8th. After full opiates he slept most of the night, waking at times. This morning, when Dr. Lyman and I visited him, his features were pale, sunken, and pinched; he answered questions clearly, but took little notice if not addressed. The pulse was thready, 120. Temperature 100°. He had hiccough, eructations, and vomiting of grumous matter. At six P. M. it became difficult to count the pulse. The pain was not so much complained of when I saw him at about this time. Subcutaneous injections of brandy were ordered, under which the pulse rallied for the next hour or so. I was summoned again about nine o'clock to find him moribund. He had become delirious, and then comatose. The urine had been scanty during the day, and in the afternoon had to be drawn by catheter. The quantity was twelve ounces, of strong odor, high color, specific gravity 1031; albumen, two per

cent., with large zone of urates; urea greatly increased; abundance of epithelial casts. He steadily sank, and died at 11.20 P. M.

The above account is from notes furnished by Dr. C. W. Brown, ophthalmic interne, and Mr. B.'s faithful attendant.

Autopsy, by Dr. W. P. Bolles, twelve hours after death. The abdomen only was opened. There was a small quantity of purulent fluid in the peritoneum, and there was recent inflammation of a portion of the peritoneum having its origin at the appendix cæci. It extended over most of the right side of the abdominal cavity, was generally slight, with a very thin film of exudation, but at the cæcum it was very marked, with much adhesive fibrin, the adhesions being about as hard as cheese; the surface was reddened, and the sub-serous tissues were œdematous. Portions of the small intestines touching these places were inflamed, while the neighboring coils not so touching were free. The appendix cæci was adherent, much enlarged and thickened, black and dilated. It contained an oval concrétion slightly larger than a cherry-stone, with two or three smaller ones. Its canal was large enough freely to admit this body. The concretion was of a yellow-ochre color, rather hard, and apparently composed of a number of layers. The small intestine, just above the cæcum, contained four or five hard, yellow masses, of little fæcal odor, looking somewhat like curdled milk or cheese. Of these the largest was as large as a black walnut, the smallest no larger than a filbert, and of this size there were more just at the entrance of the valve and small enough to just go through it. The largest would have had some difficulty in doing so.

The kidneys were rather large, with marked cloudiness of the cortical portion, and slight redness of the cones, but they were not nearly so red as the scarlatinous kidney should be. The spleen was soft, the liver and other organs normal.

The uncommon occurrence of typhlitis in the course of another acute disease has led me to give perhaps too full a record of the symptoms. How long the concretion had been lodged in the appendix is uncertain, but its appearance did not indicate a recent formation. The scarlatina was progressing most favorably when the peritonitis was suddenly developed and caused a fatal prognosis, only too soon verified.

It will not be considered impertinent if I close this paper by recording the high estimation in which Mr. Bridgham was held by all who knew him, and the loss the profession has sustained in his early death at the post of duty. It is common to say of those who die young that they were youth of rare promise. In Mr. Bridgham's case this is no unmeaning eulogy. If zeal, judgment, and accuracy like his, while gaining esteem from one's peers, do not always command success in practice as they ought, he would have been aided by his manly and cheerful address, his sympathy with suffering, and firmness in its relief. His

tact and willingness made the course of his hospital duties run smoothly, and his bright face is sorely missed in the wards. Conscientiousness and fidelity won the appreciation of his teachers and employers, and, with his high Christian character, endeared him to us all.

RECENT PROGRESS IN SURGERY.[1]

BY J. C. WARREN, M. D.

Excisions of the Shoulder-Joint for Gunshot Injury.[2] — Preceding the section of Dr. Otis's valuable work devoted to this subject is an interesting account of five hundred and five cases of shot fractures of the shoulder, treated on the expectant plan. The small mortality of less than one third is accounted for by the fact that the cases of least severe injury were selected for this mode of treatment. Dr. Otis says, "While the opinion offered in my preliminary report of 1865 may have been expressed too emphatically, as deduced from insufficient data, it may still be held that the proportion of cases of shot fracture at the shoulder in which an expectant treatment is expedient is comparatively small, and that recourse should generally be had to excision, unless concomitant injuries of the blood-vessels or nerves, or extended lesions of the soft parts or of the shaft of the humerus, render amputation imperative.

There were eight hundred and eighty-five cases of excision at the shoulder reported, and the results as to fatality have been ascertained in all save nine. There were fourteen cases of partial excision of the head of the humerus, with one death. The results showed the comparative safety of free openings into the shoulder-joint after shot injury, but do not prove that when the head of the humerus is grazed or grooved by a ball it is safer to slice off the injured portion rather than to decapitate the bone. Anchylosis was too frequent to permit much to be said in favor of partial excisions in this region. A useless arm is recorded in seven instances. The results of intermediary decapitations of the humerus were found to be much less satisfactory than primary operations; of one hundred and seventy-five of the latter, fifty-six died; of the former, twenty-one out of fifty-five survived. The mortality was twelve per cent. greater than in secondary operations which were attended by better results than all the other varieties of operations.

Of excisions of the head and portions of the shaft of the humerus there were five hundred and seventeen cases. The two hundred and ninety-three cases of primary excision gave a mortality of 27.3 per cent. In the one hunded and fifty-five cases of intermediary excisions there was a mortality of 41.2 per cent. There were fifty cases of sec-

[1] Concluded from page 733.

[2] The Medical and Surgical History of the War of the Rebellion. Part II. Vol. II. George A. Otis, M. D. Washington. 1876.

ondary excisions of this class with a fatality of twenty-four per cent. Of the whole eight hundred and seventy-six cases of excision in which the result was known there was a mortality of 34.8 per cent.

In the Franco-German the mortality of this operation among the Germans was thirty-eight per cent. and among the French 62.5 per cent. The number of cases in both these instances was much smaller than in our war. Apart from those given in the surgical history of the war there have been collected but three hundred and ninety-eight cases of excisions at the shoulder for shot injury. The recoveries were somewhat more than sixty per cent.; 36.6 per cent. of the excision on the right side died, while 29.8 per cent. of the excision on the left side proved fatal. These results are not in accordance with the inference of Esmarch that "the operation on the left side seems to give less favorable results than on the right."

There was a steady increase in the relative frequency of excisions of the shoulder as the war progressed, and the surgeons acquired experience. The utility of the limb after this excision for shot injury is stated by Dr. Otis to be generally less than is recovered in some instances of anchylosis after disease, though greater than might be inferred from the reports of the pensioners.

The anterior longitudinal incision was the favorite procedure in operating. There were no reported instances of real sub-periosteal excisions, nor any examples of reproduction of bone to any great extent. The necessity for amputation after excision seldom arose. Among the conclusions drawn by Dr. Otis in regard to gunshot injuries of the shoulder we may notice the following: (1.) In slight shot injuries of the shoulder-joint an expectant conservative treatment is justifiable. (2.) If the ball is impacted in the head of the bone, or if the epiphysis is much comminuted, unless there is injury to the blood-vessels and nerves, or very grave injury of the other soft parts, primary excision should be practiced. (3.) Concomitant fractures of the acromial end of the clavicle, or of the neck or processes of the scapula, or of the upper third of the humerus, do not necessarily contra-indicate excisions at the shoulder.

Excisions at the Elbow-Joint for Shot Injury will be considered in a future report.

Excisions at the Wrist for Shot Injury. — Ninety-six such operations were returned, and are distributed into subdivisions according to the part excised. Six cases are described as total excisions or extirpations of both rows of carpals with resection of the distal ends of the radius and ulna. Ninety partial excisions consisted in the removal in whole or part of one or more of the bones entering into the carpal articulation. Fifteen cases, or 15.6 per cent. resulted in death, — a higher mortality-rate than was observed in amputations in the fore-arm for shot

injury in general, but not much greater than the death-rate in amputations in the fore-arm on account of shot fractures at the wrist.

Of the six complete excisions at the wrist, one proved fatal after recourse had been had to amputation in the fore-arm. The five others recovered with the function of the hand much impaired, but, all things taken into consideration, in a better condition than if they had been subjected to amputation. Of the ninety partial excisions, twenty-one in whom the hand was preserved, nearly all recovered with anchylosis and extreme deformity. Generally the hand was strongly deflected to the radial side, often at right angles, the fingers rigidly fixed in flexion or extension, the end of the ulna projecting, and the integument over it irritable and exposed to accidental injuries; yet two of the men re-enlisted, and in several the deformed hand appears to have been preferable to any prothetic appendage. There were no such triumphs as were achieved in excisions at the shoulder, and, in less proportion, at the elbow, yet the mortality attending the excisions was not excessive, and the results in a few of the cases not altogether unsatisfactory. Dr. Otis states that "the first total excision of the wrist-joint was performed in about 1800 by the younger Moreau." Fergusson and others brought about a sort of revival of the procedure in cases of caries in young subjects, but reported rather unfavorably as to its utility, and the general verdict of systematic writers was that the results were discouraging. The methods employed involved great injury to the tendons and frequently to the blood-vessels and nerves. Such were those employed during our war. Dr. Otis thinks the plan devised by Lister in 1864 "as revolutionary in this branch of conservatism as his celebrated antiseptic method is likely to prove in the entire domain of operative surgery." Dr. Otis concludes this section with the following remark: "But the question whether the wrist-joint from its complexity is altogether unfitted for the favorable performance of excision for injury is still not fully elucidated."

The mine of valuable facts, contained in this work, bearing upon some of the most important problems of modern surgery can be fully appreciated only by those who compare the work here accomplished with the annals of all military surgery. The vast material here accumulated gives an adequate idea of the scale on which our war was carried on. Too great credit cannot be awarded to Dr. Otis for the skill with which he has handled so huge a subject.

Popliteal Aneurism cured by the Application of Esmarch's Bandage. — Dr. Walter Reid reports a case of popliteal aneurism of three weeks' standing cured in this manner.[1]

The aneurism was of considerable size, and occurred in a healthy

[1] The Lancet, September 25, 1875.

seaman of middle age. After numerous attempts with various forms of compression which failed to arrest the pulsations, Esmarch's bandage was applied to the whole limb, the aneurism being passed over lightly. The limb assumed a death-like pallor, and its temperature diminished. The aneurism remained of its usual size but was pulseless. The elastic tubing was removed at the end of fifty minutes and a Carte's compressor was substituted. On raising the latter a few minutes later no pulsation was detected. Light and intermittent compression was continued during that day and the next. The pulsation did not return. Dr. Reid suggests that "the loss of temperature, and that particular condition of the tissues closely allied to death may have had some effect in the formation of the coagulum." The use of Esmarch's bandage in a case of necrosis, when the operation had lasted over an hour without evil result following, had suggested to him the practicability of the application of this bandage where it was necessary to arrest the circulation for a considerable length of time.

Another case treated in the same way occurred under the care of Mr. Wagstaffe at St. Thomas's Hospital.[1] A barman, aged thirty-two years, when pushing a heavy cask some five months previously, had felt "something snap" in his right popliteal space. On admission there existed a pulsating tumor at that point two inches long, filling the upper half of the space, terminating opposite the junction of the femur with the tibia, together with considerable œdema of the leg. An Esmarch's bandage was applied tightly over the foot and leg up to the lower border of the popliteal space, carried lightly over the tumor (a thin layer of cotton-wool intervening), and then continued tightly over the thigh to within three inches and a half of Poupart's ligament. The bandage was left on for one hour, during which time the patient was very restless and complained of pain. One third of a grain of morphia was given subcutaneously. At the end of this time a tourniquet was placed on the femoral artery, and Esmarch's bandage removed. A second tourniquet alternated with the first, and pressure continued for twenty hours; pulsation had ceased at the end of two hours and did not recur after the tourniquet was finally removed.

Extirpation of the Larynx. — Dr. Maas[2] performed this operation in a case of cancer of the larynx of nine months' duration. Tracheotomy had been performed previously owing to difficulty of respiration. The various steps of the operation were: incision on the median line exposing the larynx; section of the hyo-thyroid and hyo-epiglotidean ligaments after the larynx had been peeled out from its bed on each side by a periosteum elevator; next, separation from the œsophagus; and finally from the trachea close to the cricoid cartilage. The opera-

[1] The Lancet, September 30, 1876.

[2] Langenbeck's Archiv, xix. 3. Wiener medizinische Presse. October 1, 1876.

tion lasted one hour. The wound was plugged with cotton-wool. The patient rallied well from the operation, and on the ninth day was able to leave his bed, but on the twelfth day he had a chill, and died of pneumonia on the fourteenth day. The operation was performed at the residence of the patient. To prevent the flow of blood into the trachea a footstool was placed under the patient's back, thus directing the flow of blood towards the head. A rubber tube was kept permanently in the œsophagus for the purpose of feeding the patient, and caused no discomfort. The reporter to the *Wiener Presse* states that this operation has been performed seven times, with three deaths.

PROCEEDINGS OF THE NORFOLK DISTRICT MEDICAL SOCIETY.

ARTHUR H. NICHOLS, M. D., SECRETARY.

THE quarterly meeting of the society was held in Bradley's Building, Roxbury, Tuesday, November 14th, the president, DR. JOHN P. MAYNARD, in the chair. Present, forty-eight members.

Intussusception: Separation and Expulsion of a large Portion of the Ileum: Recovery. — DR. EDWIN P. GERRY, of Jamaica Plain, reported a case of the above-mentioned lesion of extreme rarity and interest. The patient was a man, aged seventy-one years, and when first seen, June 29, 1876, complained of pain in the abdomen, referred to a point two inches below the umbilicus. It was ascertained that for three days previous to this attack he had experienced colicky pains, on account of which Epsom salts had been resorted to with good effect. In the course of a few hours the symptoms became aggravated and alarming, and of a character to leave but little doubt as to the existence of intestinal obstruction. Copious enemata were now administered, and the patient, having had a free action of the bowels and having vomited several gallons of a reddish-brown liquid, appeared to obtain complete relief.

The obstruction once relieved, he continued to convalesce favorably upon a stimulating liquid diet until July 9th, when he experienced another ill turn, characterized by cold hands and feet, and a feeling of general malaise. This passed off, however, and he continued to gain until July 16th, sixteen days after the original attack, when an elevation of temperature was observed with accelerated pulse, which continued until the 21st. At no time, however, was the rate of the pulse above 80, and the highest temperature recorded was 102.8° F.

Upon the morning of the 21st, three weeks after the first illness, there was expelled per rectum a portion of the small intestine measuring *seventeen and one eighth inches* in length, forming probably that part of the ileum lying immediately beneath the umbilicus. The specimen was displayed by Dr. Gerry. It exhibited throughout traces of the exudation of lymph, and at the points of separation looked gangrenous and worm-eaten. From the circumstance that the specimen, when expelled, was not inverted, Dr. Morrill Wyman (who,

among others, had seen the case in consultation) had concluded that the intussusception might have been upwards.

After the expulsion of the intestine, the patient had a free dejection. His appetite returned, and he continued to improve until August 4th, upon which day abdominal pains set in, accompanied by tympanites, so great as to induce dyspnœa. Relief was afforded, however, in the course of a few hours, after considerable thick liquid had been thrown up, coming apparently from the stomach and upper part of the small intestine. The vomiting, which supervened at this time, continued subsequently to constitute the prominent symptoms. It has at times been excessive, the patient ejecting this liquid every few minutes for a period of forty-eight hours; while, at other times, the stomach has been able to retain the ingesta for one or two weeks. The usual quantity vomited at any one time was about a quart, but latterly the vomiting has been growing less and less severe. Dr. Gerry was inclined to attribute this obstinate symptom to the catarrhal condition of the bowel, the muscular fibres of which had been subjected to long-continued distention and relaxation by the accumulation of retained fæces. This relaxed portion of the intestine formed, when distended, a sort of pouch, which could be distinctly felt, adherent apparently at certain points to the walls of the peritoneum.

At the present time a distinct ring can be felt upon pressure, occupying the seat below the umbilicus to which the pain was originally referred. Dr. Gerry thought it remarkable that the process of separation of the invaginated intestine by the process of gangrene should have been attended by such comparatively trivial constitutional symptoms.

Dr. H. A. Martin, who had seen the case in consultation several times, from June 29th to July 15th, observed that he considered it one of the most remarkable in the history of pathology. The most striking and extraordinary features of the case were: —

(1.) The very great length of the invaginated intestine separated and expelled.

(2.) The absence of severe pain and stercoraceous vomiting.

(3.) The advanced age of the patient in connection with his survival of so grave a lesion.

Upon his first examination, on the first day of the illness (June 29th), he found on careful percussion of the abdomen a region of great flatness, corresponding in situation to the cæcum, and occupying about one fourth of the entire abdominal surface; one very limited portion of the region was tender, but not very materially so, upon pressure. This same spot was also the seat of continued slight pain and occasional severe exacerbations. This was the most prominent symptom, and the one for which the patient asked relief. It yielded promptly, however, to the hypodermic administration of morphia (gr. one sixth pro re natâ).

Dr. Martin suggested, moreover, the administration at short intervals of very copious enemata, with the view of distending the large intestine and thus relieving the invagination, provided that was the source of the trouble, and of dissolving the fæcal mass and facilitating its expulsion, if the obstruction was due to scybalous accumulation. Upon the next day, June 30th, the area of

flatness was unchanged. On the third day, however, July 1st, the flatness had entirely left the region of the cæcum, had been transferred to the other side of the abdomen, and was limited below by the sigmoid flexure, involving about the lower two thirds of the transverse and descending colon. In the light of subsequent developments, it would appear that there had been an intussusception of the small intestine through the ilio-cæcal valve, which with fæcal accumulation had given rise to the flatness at first noticed; and that the subsequent change of the area of flatness from the region of the cæcum to that of the colon, was attributable to the passage of the disentangled and perhaps distended intestine, with the fæcal mass, to the descending colon, at which point a second temporary obstruction was met with.

Although, at the outset, his prognosis had been hopeful, when, upon the third day the hands became cold, he could not but regard this significant symptom as pathognomonic of gangrene, and therefore of the gravest portent. The symptoms took a favorable turn, however, when affairs seemed the most desperate, and at the next visit, July 2d, the hands had become warm, pain and vomiting had ceased, while very large discharges of broken scybala had come away, and the patient seemed in every way so far on the road to recovery that Dr. Martin declined further attendance, except in the event of the return of bad symptoms. He was requested to visit the patient again in consultation, thirteen days after, July 15th, and found him doing very well, with a history since his previous visit of apparently good convalescence; and he did not consider the peculiar irregularity of the pulse first noticed during that period of any pathognomonic importance whatever.[1]

He certainly had abandoned all notion of intussusception in the case, and was amazed to hear that only a few days after the visit so large a portion of the intestine had sloughed, a process that must have occupied from two to three weeks, and had been evacuated.

Fracture of the Base of the Skull. — Dr. S. E. Stone exhibited a skull, having a fracture at its base, and interesting as involving rather a curious medico-legal question.



The skull, with the rest of the skeleton, was found near Mill Brook, in the northern part of Walpole, upon the 9th of July of the present year. It was lying within a few feet of the brook, but separated from it by a thick, hedge-like growth of bushes, under which it was partly concealed. The position of the skeleton was prone, with the right arm raised in advance of the head, which pointed towards the stream. The left arm lay under and across the body. The right leg was extended, and the left flexed beneath it. No part of the skeleton was below the level of the ground, and no stone or other hard substance could be found, with which the body could have come in contact in falling in such a manner as to produce the fracture. The body was without

[1] The pulse was of that description in which, without any other peculiarity, a beat is dropped at very regular intervals. All physicians of experience must have repeatedly seen cases in which this pulse (in the aged), habitual in health, becomes regular in sickness, the irregularity returning with convalescence.

clothing, with the exception of the feet, upon one of which was found a shoe and stocking, and upon the other a stocking only. The other shoe was found near the head, while the clothing lay mostly beneath the body. But little flesh was left upon the bones, and this was converted into adipocire. The locality where the skeleton was found was a most unfrequented spot, known to but few persons. The fracture extended from a point an inch to the left of the occipital protuberance, in a nearly straight line to the posterior condyloid foramen, and then at an oblique angle forward to the outer edge of the posterior foramen lacerum.

The question of the probable manner of production of the fracture was discussed at length. Two theories had been advanced to account for the injury. In accordance with one of these theories the fracture was produced post mortem, by the freezing of water within the skull. Another theory was that the fracture had been the cause of death. The latter view was favored by the speaker, who maintained that in the expansion of water by freezing force is exerted equally in all directions. Hence water confined within a skull would tend, by the process of freezing, to separate the bones at the sutures, and would not be likely to produce a fracture of a strong bone, like that exhibited in the specimen. He admitted, however, that the position of the skull when found would seem to favor in a measure the former theory. Dr. Stone said that he had brought the specimen to the notice of the society with the hope that others, who might have observed similar fractures of the skull, would express an opinion as to whether a homicide had probably been committed. He had not been able to find upon record any other case in which a similar doubtful point had been raised.[1]

TRANSACTIONS OF THE AMERICAN PUBLIC HEALTH ASSOCIATION.[2]

THE American Public Health Association, although it is as yet scarcely out of its infancy, shows so much vigor, we might almost say precocity, that if its life is spared and its constitution does not suffer through misadventure, it must assuredly do splendid work in leading public opinion in sanitary matters, and in formulating sanitary doctrines for the public instruction. It is emphatically a working body. Its membership is not numerous, yet its productiveness is astonishing. Its methods do not admit of holiday junketing, and indiscriminate feasting at its annual gatherings is held to be a hygienic abomination. Therefore its labors are characterized by a serious earnestness and a consistent regard for the high purposes of its organization.

A better illustration or demonstration of these features could hardly be found than in the volumes of Transactions issued by the association. The

[1] Subsequent to the meeting a second well-marked fracture was detected by Dr. Stone, situated at the base of the mastoid process and extending into the auditory meatus.

[2] *Public Health: Reports and Papers (Volume II.) presented at the Meetings of the American Public Health Association in the Years* 1874 and 1875, *with an Abstract of the Record of Proceedings*, 1872–1875. New York: Hurd and Houghton. The Riverside Press, Cambridge. 1876.

second volume, just published, is in many respects superior to the first of the series. Judicious selection has been made of the best essays read at the Baltimore and Philadelphia meetings, and these chosen productions find a place in print. We heartily commend this plan for the survival of the fittest; for while the officers of the association undoubtedly make great efforts to maintain a high standard of work, it is difficult, especially in the early years of such an organization's existence, to subordinate quantity of product to quality. But if critical discrimination be applied to eliminate the unworthy work and to preserve the best, as we are assured has been the case in the present instance, good alone will result.

We do not undertake to give to our readers an analysis of all or of any of the forty-four essays, reports, and discourses contained upon these five hundred and fifty closely printed pages. But we cordially commend these Transactions to the attention of every one interested in public hygiene, to the very large and constantly increasing class having at heart the sanitary welfare of the community. The titles under which the various elaborate essays are grouped in the present volume will show how broad is the ground on which these investigators are working; there are eleven papers under the topic Public Health Care and General Physical Conditions relating to Hygiene; eight essays and discourses pertain to Educational and Physiological Subjects affecting Health; Sanitary Engineering, Drainage, Sewerage, and Cleansing comprise nine reports and communications; Hospitals and the Sanitary Care of Contagious and Infectious Diseases include ten specially valuable papers; and there are two reports upon the Yellow Fever as it has occurred in Florida in recent years. It will be seen that with such a variety of topics handled in so many different ways and elaborated in so many directions, these Transactions assume the character of an encyclopædia of sanitary science. There is hardly a subject pertaining to public hygiene which has not been discussed in one or the other of these volumes.

Another feature, which is noteworthy, is the diversity in the professional character of the contributors to the work. Naturally the medical profession has the first place in number and influence; but physicians are very far from enjoying a monopoly of importance in this field of labor. The clergyman, the lawyer, the engineer, the chemist, the publicist, the veterinarian — all these, are represented in these volumes. We regard it as particularly gratifying that this association enlists so many and such various elements; it demonstrates the catholic character of state medicine, its comprehensive purpose, and its practical aims.

This volume, uniform with the first in the series, is printed and bound in the unexceptionable manner which marks all the work of the Riverside Press.

THE REFORM OF THE CORONER SYSTEM.

The rottenness of this system, and the worse than doubtful character of some of those holding the position of coroner, are becoming so evident that we are very hopeful that a reform is at hand. The movement for reform is

spreading and gaining strength rapidly. On the 21st of this month the question was discussed by the Health Department of the Social Science Association at a meeting which many distinguished gentlemen, not members, were invited to attend. An admirable paper was read by Theo. H. Tyndale, Esq., of the Suffolk Bar. After showing, as we have already done, that the system is an anachronism, and a very dangerous one, he gave an abstract of the laws. We will refer to but a few points. Though appointed by the governor and council, a coroner can be removed only by an address of both houses of the legislature to the governor. If the six jurors who are summoned do not appear, the coroner can fill the number from the by-standers. Thus it is evident that with a little skill he can have precisely the jury he wants. By the consent of the majority of this jury he can make the inquest a secret one. He can take charge of the property upon or near the person of the deceased, and yet he gives bonds for only $500. After alluding to the ease with which appointments are procured, and to the fact that there is no law limiting their number, Mr. Tyndale gave the following statistics: "London with its enormous population has *four* coroners; New York with a population three times that of Boston has *four*, with one medical deputy each; Brooklyn with a population one third to one half greater has *two;* Philadelphia, New Orleans, and Chicago, *two* each; San Francisco, Baltimore, Washington, and Cincinnati, but *one* each; a total of *twenty-four* (counting the deputies) for all these large cities taken together. Suffolk County, consisting chiefly of Boston, has *forty-seven* coroners, of which the city of Boston has *forty-three*, almost twice as many as all the above-named cities combined." He then showed how easily a corrupt or timid coroner might aid the escape of a criminal, and continued as follows: "But if he may thus on the one hand shield the guilty and endanger the public safety, on the other the opportunities for a man prompted by malice or vindictiveness or the desire of cheap notoriety are enough truly to make us tremble. With full judicial powers of examination and commitment, with his chosen constable selecting his own jury, with supreme control of the investigation, which with the consent of part of his jury he may make secret, with the selection of his medical witness, and the power to summon and hear or omit and exclude whomsoever he will, uncontrolled by superior authority, and responsible, practically, to no one for his action, he may bring ruin upon a life, or cloud and embitter it, throwing suspicion on the character of the living and blackening the memory of the dead; he may oppress and harass a stricken household without cause and without justification; he may make an inquest, in the worst sense of the word, an inquisition." The plan which Mr. Tyndale proposes as a substitute for the present miserable system appears to us a very excellent one. He would do away altogether with juries which are utterly useless except in very exceptional cases. They are as a rule mere figure-heads, and are liable to be worse. He would divide the office of coroner into two, a medical and a legal one. The holder of the former should inspect the body and make the autopsy, that of the latter should conduct the inquest, and be at liberty to insist upon one. We agree entirely with Mr. Tyndale that two such medical officers would be enough for Boston, and that by this plan the office could be rescued from the present contempt. He would have the

work entailed by the legal office, performed by the judges of the district and municipal courts. We must be permitted to quote one more extract to show the practicability of the plan: "There were held in Boston during the year ending April 30, 1876, one hundred and ten inquests and four hundred and twenty-three views, costing the city the sum of $10,769.74. This expenditure included for medical examinations $1790, for chemists $170; and this with the $4000 or more paid to jurors, constables, and scribes would give enough to pay good salaries to two competent medical officers; and when you consider that no new judge is needed you have another $3500 at your disposal. The number of views and inquests just mentioned is so largely in excess of the published facts as to give ground for the supposition that practices may prevail which under a competent and responsible medical officer would not occur, and thus the number would perhaps be materially reduced."[1]

The discussion which followed this excellent paper was opened by the Hon. Emory Washburn, who remarked that he doubted the necessity of retaining the office of coroner at all, and he favored the abolition of the jury in any case. He regarded the present system as very prejudicial to the interests of justice. Dr. Cotting favored Mr. Tyndale's suggestion, and wished that the medical officers should be appointed by the governor and council on the recommendation of the Massachusetts Medical Society. Dr. Richardson remarked that there should be a simpler means of dismissing coroners for cause than the present one. This indeed is very important, and we trust will be incorporated in whatever measure may be adopted. A committee was appointed to represent the facts to the governor of the State, and to consider their publication.

Here is occasion for great congratulation. The Social Science Association is doing good service to the public by taking up this matter, which has been too long neglected. It is very gratifying to us to see the distinguished gentlemen who are taking part in the movement to which we are fully committed. It is not professional dignity alone that demands the reform; it is called for in the name of public decency, and for the protection of the innocent and helpless. We cannot believe that the iniquity will be longer endured, and we trust that with other "old shapes of foul disease" the New Year bells will "ring out the coroner system."

MEDICAL NOTES.

— We take the following from the report of the Secretary of the Treasury: The Supervising Surgeon General reports that a larger number of seamen have availed themselves of the benefits of the Marine Hospital service during the fiscal year 1876 than in any previous year of the existence of that service. Increased facilities are afforded for obtaining relief, and many of the seafaring who are injured or taken sick at places where it is impracticable to provide proper care are sent to the nearest relief port at the expense of the service. Relief is now furnished at ninety-one ports, and 16,801 seamen received care

[1] We are requested by Mr. Tyndale to state that he wishes to acknowledge his indebtedness in the preparation of this paper to the admirable address of Mr. Herschell, Q. C., M. P., to which we have already referred.

and treatment during the year just closed. The expenditures from the fund contributed by the seamen amounted to $439,151.13. The necessary repairs to the hospital buildings, and the furniture, fuel, lights, and water for the same were in 1876 for the first time paid out of the fund. The marine hospitals at Mobile, Ala., and Louisville, Ky., which were leased at the close of the war, were refitted and again opened for the exclusive use of seamen, on September 1, 1875, and January 1, 1876, respectively. The Cleveland Hospital, on the other hand, has been leased under the act of March 3, 1875. The magnitude of the service at New York would seem to warrant the establishment of a hospital at that port for the exclusive use of seamen. The Supervising Surgeon General represents that great embarrassment arises from the frequent attempts to break down the provision of the Marine Hospital service regulations requiring a practical preliminary examination into professional qualifications of candidates for appointment to the corps of surgeons. The seamen whose earnings are taxed for the especial purpose of creating a fund for their relief when sick or disabled are certainly entitled to the best medical and surgical skill, and manifestly none other should be employed. It is therefore suggested that legislative provision be made for the examination of medical officers of that service, similar to that now existing for medical officers of the army and navy. Of the hospital dues collected from seamen, $344,670.78 were converted into the treasury during the year. For twenty successive years, up to June 30, 1874, the annual deficiency appropriations made by Congress, and expended, averaged $182,452, but no deficiency appropriation has been asked for this service since 1873, and none will be required for the year 1878.

LETTER FROM NEW YORK.[1]

MESSRS. EDITORS, — The flooring in the whole hospital, wards, halls, etc., is tiling laid in cement, from the basement to the smallest room in the mansard roof, in every little closet, and under the wash-basins; and in fact wherever it is possible to place a tile you find one. While there are no doubt many advantages in this kind of flooring, it does not seem to be the proper material for the wards; it makes them noisy, cold, and gives them a cheerless look; they will have to lay some kind of carpeting around the beds (perhaps Turkey rugs) for patients to stand on, and this will be worse than having wood flooring, as far as affording a nidus for infection is in question; but of course it is more elegant.

The halls in the centre of each story are fourteen by twenty-four feet, with a southern exposure. I understand that it is intended to use them as sun-rooms; one cannot but think that it would have been better to have built a room for this purpose, as it has always been considered a disadvantage to allow patients to lounge in the halls.

Over each bed there is an electric signal connected with a gong in the nurses' room. Just above this is a gas bracket, and above are two staples from which a crane can be hung, either to raise a patient from the bed, or to suspend a limb. I should add that the brackets are made to order and are of *gilt*.

1 Concluded from page 744.

The fifth story is the first in the mansard roof. On the right or west side is a ward of the same size as the other, but with a lower ceiling; the windows are double, and there are not so many of them. This, I understand, is to be used as the main surgical ward. Opposite, on the other side of the main hall, is a passage-way leading to the operating theatre. On the right are two rooms, one for the administration of ether, the other to be used for a recovering room. The passage-way terminates in an open space leading by a door into the theatre, and by an iron staircase into the amphitheatre. The operating room is forty-eight by thirty; it is well lighted on the north side by a window twenty feet wide, extending up to the roof, where it is met by a sky-light of the same width, which extends on to the roof some fifteen feet, thus giving the operator an abundance of good light.

The seats for spectators are arranged in a semicircle, one above the other, and will probably accommodate one hundred and fifty or two hundred persons. On the posts at either end of the semicircle of seats calcium lights are to be placed, so that by the aid of a mirror a strong light can be thrown into any cavity. The theatre is well provided with gas-burners, so as to afford an abundance of light by night. The instruments are to be placed in the further end of the theatre in a case having a large plate-glass sliding door. In the spaces left in the corners behind the seats are two rooms; one is fitted up as a toilet room, and the other for apparatus. The operating theatre is to have every convenience in the way of water, etc., that it is possible to devise, and is connected with the etherization room by speaking-tubes. On this floor is a room sixteen feet square, which can be used as an isolating ward. This is the highest story over the wards, but the main building is carried up two stories more. In the sixth story, the second in the mansard roof, is the general kitchen of the hospital, fitted up in the very best manner with every convenience. It is connected with each ward dining-room by a steam elevator. Beyond the kitchen on the eastern end of the building is the drying room for the washing, heated by steam-pipes. Next to this is the ironing room. The upper story in the top of the roof is the washing room, and contains three steam washing machines, etc., besides several large tanks. It seems rather small for the purpose, and not in keeping with the other arrangements of the house. It has, however, as handsome tiling on the floor as there is in any other part of the hospital. It is connected with the drying room below by a slide. On this story is what is called the super-heating room, containing an iron box large enough to receive a bed and bedding. It is closed tight and raised to 250° for the purpose of disinfecting. There is also a fan nine feet in diameter run by an independent engine to draw the air from the foul-air shafts to which reference will presently be made.

The building is finished in maple, highly polished, and the wooden door-frames are just thick enough to hold the hinges. The walls are lined with cubes of asbestos, and over this the plastering is placed. All partitions are made in the same way; there is no lathing in the building. The staircases are of stone, and are placed at the back of the halls, behind the elevator, and are about six feet wide; they are badly lighted. The whole building is heated by steam. We miss fire-places in the wards; they not only add to the cheerful-

ness, but would aid much in ventilation, in case the elaborate system which has been adopted should not work quite satisfactorily. As the plans of heating and ventilation are so intimately connected it will be well to describe them in this place. In the cellar is a series of air-boxes containing steam-pipes connected with a fan nine feet in diameter, to force the hot air into the wards through pipes inclosed in the wall. The hot air enters the wards through an aperture about one inch wide and twenty-four inches long, placed in each window-sill, about three feet and a half from the floor; there are, therefore, twenty of these in each ward. The rooms other than wards have common steam heaters. Between each window, and so placed that it will be behind each bed, is a foul-air register, situated about eighteen inches from the floor, and opening into a foul-air shaft running directly up to the top of the building, and receiving from corresponding places in each ward the foul air from similar registers. At the top of each wing of the building, and extending its whole length, is a large collecting pipe, into which each of these foul-air shafts in the wall enters, and the foul air thus collected is conveyed into a receiver placed at the top of the main building in the mansard roof, where a fan similar to the one in the cellar is placed, to draw it upwards. About three feet from the wall, and perforating the flooring corresponding to the position of each bed, is an iron pipe five inches in diameter, which takes a sudden turn, and running under the floor passes into the main foul-air shaft just below the register. There are eleven of these on one side and nine on the other.

At the angle between the wall and the ceiling is another ventilating register connecting with the same shaft; there is one of these in each of the spaces between the windows. These are for use in summer only, to assist in keeping the wards cool. The foul-air shafts are heated by steam-pipes, to aid the draught. The following seems to be the plan of ventilation. The cold air is taken in on either side of the vestibule in the front of the building, about twenty-one feet from the pavement, in order to escape any miasm from the ground; it is then drawn into the steam-chests in the cellar, and from thence forced into the wards through the apertures in the window-sills. It should have been noted that the inclination of the supply tube is such that the hot air is forced upwards and inwards towards the middle of the ward. From the force with which it is projected it is supposed to meet the current from the opposite side and mingle with it, and then be drawn downwards into the register near the floor by the draught in the foul-air shaft, aided by the fan in the roof. The heavier foul gases are supposed to be carried away through the iron pipe under the beds. The only means of getting fresh air into the wards is through the hot-air pipe in the windows. The above plan of ventilation rests upon the theory that in an air-tight room you can keep the air pure by forcing in fresh warm air three feet from the floor, and by drawing it out at the bottom, provided you can furnish sufficient exhausting power above. Now a ward is not an air-tight room in any sense of the word, and it remains to be seen how pure the air can be kept by this method. The heating and ventilating apparatus has been no small item of expense, and in case it is not found to work well it will leave the hospital in rather a bad position. In summer it is intended to keep the wards cool by the same means, with the upper ventilators open.

The plumbing is all exposed, so that in case there is any leakage it can be readily found. It has been done not only in the best but in the most expensive manner. The post-mortem room is built on the west side, beyond the extension, and is connected with the dead house by a passage-way, and with the executive story by another hall passing over the dead house. The room itself is twenty-five feet square, and is abundantly supplied with light from a glass front and sky-light.

The table is similar to that used in the Massachusetts General Hospital except that it is on scales. The ventilating flue for the table is the main shaft from the furnaces. The room is also ventilated by eight registers connected with the same shaft. The seats for spectators rise one above another, and will accommodate about fifty persons. There is a toilet room on one side; on the other is a small room provided with a soap-stone tub into which a body can be placed and injected, it is also to be furnished with an Aligrete refrigerator for keeping specimens. After the hospital was almost finished it was found that no accommodations had been provided for the help. The executive building has been raised two stories. The first story in the new part is for the help, and the upper has been made into a recreation room, being divided for males and females. The solicitude of the governors to take every precaution against fire seems to have vanished when they turned from the hospital to the executive building, for if there ever was a tinder-box placed in a house the new part of this building is one. It is made of southern pine throughout, and is heated by steam. Below it is one of the most valuable medical libraries in the country, which should have been guarded as carefully as possible from all danger of fire, yet they have placed over it sleeping apartments for the help, who are not of the most trustworthy class, and if some accident does not happen it will not be because those who have been superintending the hospital made any provision to guard the library. The hospital is connected with the executive building by two iron passage-ways.

In going over the hospital one cannot help noticing the expensive and elaborate way in which everything has been done. No expense has been spared in any of its departments. One of the most problematical things about it is the ventilation; it is certainly elaborate, but, if I mistake not, the experience in hospitals heretofore has been that the more elaborate the plan of ventilation, the greater has been its failure. If it fails here the hospital is a failure, for it will be impossible to substitute any other mode of heating and ventilation without almost rebuilding. In planning the building the board seem to have had this problem to solve: given a space of ground, one hundred and seventy-five feet by eighty feet, what plan can be adopted that will *handsomely* cover this amount of space? That a great amount of money has been expended on the hospital that will not add one iota to the comfort of the patients or afford the least aid in furthering a favorable issue, no one can deny. Plate and stained glass windows, electric signals, and gas-lights over each bed, are only samples of the ways in which money has been uselessly spent.

There is not an inch of ground unoccupied about the hospital except a small space in front of and at the side of the executive building, where a fence is being placed so as to keep patients away from even this space. If conva-

lescents wish to take out-of-door exercise they must go into the street. When the abandonment of the old New York Hospital was under consideration a proposition was made to lease a portion of the grounds, not actually needed, for business purposes, from which an ample fund could have been derived; but no, the majority of the board refused it on *sanitary* grounds, saying that it would be depriving the patients of breathing space and would not give convalescents any place for out-of-door exercise. The short space of four years seems to have wrought a change in the opinion of these same gentlemen on sanitary laws; those who then thought that nothing less than a city block was space enough in which to build a hospital now pride themselves on an institution without an inch of unoccupied ground about it. Truly, consistency is a jewel.

COMPARATIVE MORTALITY-RATES FOR THE WEEK ENDING DECEMBER 16, 1876.

	Estimated Population, July 1, 1876.	Total Mortality for the Week.	Annual Death-Rate per 1000 for the Week.	Death-Rate for the Year 1875.
New York	1,061,244	467	22.88	29.35
Philadelphia	825,594	316	19.90	22.24
Brooklyn .	506,233	204	20.95	24.92
Chicago . .	420,000	158	19.59	19.75
Boston . .	352,758	144	21.23	26.20
Providence	101,500	44	22.54	19.02
Worcester .	51,087	14	14.25	20.91
Lowell . .	51,639	30	30.21	20.55
Cambridge	49,670	15	15.70	23.31
Fall River	50,372	14	14.45	23.99
Lawrence .	36,240	10	14.35	25.96
Lynn . .	33,548			19.23
Springfield	32,000	2	3.25	20.93
Salem . .	26,344	15	29.61	22.92

Normal Death-Rate, 17 per 1000.

DR. MARTIN & SON wish it to be distinctly known that the "vaccine virus" used by Dr. Adams, in the cases reported in the JOURNAL last week, was not obtained from them or either of their agents.

A meeting of the Boston Society for Medical Observation will be held on Monday evening next, at its rooms, 36 Temple Place, at eight o'clock. A Case of Hip Disease will be reported by Dr. C. P. Putnam.

SUFFOLK DISTRICT MEDICAL SOCIETY. — The regular meeting will be held at the rooms, 36 Temple Place, December 30th, at seven and a half o'clock. The following papers will be read: —

Dr. T. M. Rotch, A Letter from Vienna.

Dr. A. Day, Inebriety and its Cure.

ERRATA. — Page 727, seventh line from the bottom, "fluid ounce" should read, "fluid drachm."

Page 728, eighth line from the top, "an ounce" should read, "a drachm."





